# Journal of Comparative Literature and Aesthetics

Design and its Relations
Special Issue Editor: Michalle Gal

Layout and Typesetting: Amarendra Mahapatra
Printed in India by Dhara Shree Radha Trust, Bhubaneswar

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## ARTICLES

# Introduction

## MICHALLE GAL

Design is an omnipresent, aesthetic-functional phenomenon, one that is culturally loaded and broadly influential. Since ancient times, design has played a crucial role in shaping both our intimate daily experiences and broader societal structures. It influences behavior, preferences, cultural norms and movements, political or personal identities, and economic systems. Today, design is not only a thriving field of practice but also an evolving area of academic inquiry, one that is becoming a self-standing discipline. It is, of course, important to define 'design'[1]. But, in developing our understanding of it, we also need to analyze its relationships to associated fields, such as ontology, cognition and perception, ethics, politics, social conduct, fine or popular art, everyday aesthetics, and science and technology.

The special issue *Design and its Relations* takes up this mission. We aim to reveal and study the interactions between design as an aesthetic-functional field and various auxiliary concepts, ideas, phenomena, and disciplines. The essays in the special issue thus address a range of design affiliations. These include both (a) relatively abstract affiliations—such as aesthetics, perception and appreciation, beauty, ethics, science, rationalism, and the idea of abstractness itself—and (b) more direct topics, including design's relations to photographic systems and even cultural views of parenthood given through the evolution of crib shapes (which is a typical substantiation of design's impact on humanity's foundations).

The volume opens with the basic relations between design and definitions, namely, design and philosophy. Thomas Leddy's essay "Design and Definitions: Reflections on the Question of 'What is Design?'" explores the design concept, highlighting its "contested" status. Leddy critiques traditional definitions and proposes an "honorific definition", which blends modernist functionality with postmodernist self-expression. This new definition positions design at the intersection of these two perspectives across various platforms. It also focuses on interactions between users and the design object rather than just the designer's intentions. Leddy further challenges Parsons' narrow view of modernist design as the paradigm. He then suggests a cultural, holistic, and dialectical approach, one that is intended to reconcile modernism and postmodernism. Leddy's Hegelian framework entails viewing modernism as a thesis, postmodernism as an antithesis, and the resulting synthesis as the future. This underscores the equal importance of the designer's and the user's roles in shaping design. By emphasizing user engagement in the design process, Leddy proposes a living definition that adapts to design's evolving nature. Using Facebook as an example, he illustrates how design both affects and is affected by our daily lives and interactions.

Thinking abstractly about design leads us naturally to Pauline von Bonsdorff's illuminating analysis of the relationship between design and a basic element of our aesthetic experience, which she calls "tacit aesthetics". In her essay " Design and Tacit Aesthetics: design as the art of objects-in-use," von Bonsdorff draws on the idea of tacit knowledge to challenge established views that prioritize sight over supposed "lower senses" like touch or smell, as well as balance and movement. Following Gibson's ecological theory of perception, Polanyi's notion of tacit knowledge, and Merleau-Ponty's concept

of dynamic attention, von Bonsdorff claims that touch and movement are central to tacit aesthetic perception. This is especially relevant in our everyday experiences with design objects and their appreciation. Rather than an atomic perspective, von Bonsdorff emphasizes rich, incidental inter-actions with design objects—interactions that are deeply entwined with individual, spatial, and cultural contexts. Perceiving everyday objects as cultural entities (rather than just tools) engages various contexts that shape our perception. These contexts include sense experiences, use patterns, and design ideologies. Von Bonsdorff illustrates this with examples of Finnish tableware from the mid-twentieth century, particularly Kaj Franck's designs. Doing so demonstrates how pertinent material, form, and design ideologies influence our aesthetic engagement with objects.

A profound and comprehensive characterization of design objects as essentially constituted "dur-ing the user's active interaction with design objects" is offered by Matilde Carrasco Barranco as well in her "Design and Aesthetic Appreciation: Form, Functionality, Performativity." Analyzing the relations between design and methods of appreciation, she argues that design objects' aesthetic qualities are not just inherent. They are performative, in addition to formal and functional. The innovative essay focuses on design's aesthetic appreciation, which is shaped by an object's actual use—sometimes the use of each individual. Carrasco Barranco renounces the standard focus on stable properties, instead offering a more active and pluralistic view of design aesthetics. This out-look broadens design philosophy's scope by enriching our understanding of design. It does so by (a) acknowledging that beauty and functionality are intertwined with performative experiences and (b) challenging the formalism-functionalism dichotomy. Jane Forsey and Panos Paris also offer theories of design appreciation that entail the dissolution of this dichotomy. Both provide aptly thought-provoking ways to think about beauty and design.

Jane Forsey's essay "Design and Beauty: Functional Style" presents a novel and intriguing theory of design's distinctive aesthetics. She does so by examining the interplay between form and function in design objects from within the frame of the object's purpose and (stable) ontological identity. Drawing on Immanuel Kant's concept of dependent beauty, Forsey proposes a thought-provoking "functional style" category and challenges what she calls "unified theories of beauty". These theories equate design with art, which Forsey finds inadequate for capturing functional objects' aesthetic value. She instead grounds her theory in four key distinctions: design and art, aesthetic and instru-mental judgments, function and use, and ornamentation and decoration. Her intentionalist stance supports the idea that design appreciation should focus on object functionality and that aesthetic experiences are rooted in our knowledge of the objects' practical use. "Functional style" then emerges from how well a design fulfills its intended purpose, linking its form directly to its functional success. This perspective represents a valuable contribution to aesthetics and design philosophy.

Like Forsey and Carrasco Barranco, Panos Paris' theory of design aesthetics supports the claim that design owns a unique kind of beauty while offering an innovative and deep study of design's relations to ethics and values. Paris aims to fill the ethical gap in theories of design beauty because, as he puts it, "design has an ineliminable ethical dimension, in a broad sense of being linked to the humanly good, and that it is through a range of values that we perceive design beauty". Paris' essay "Design and Value: The Ethical Nature of Beautiful Design" thus introduces an axiological concep-tion of functional beauty, one that addresses the values this beauty embodies and its impact on daily life (from architecture to technology). In covering both design objects' various affordances and function's complex relations to forms, Paris broadens the notion of functions (as relevant to design). Design beauty is closely tied to functionality and ethical considerations. Beautiful design is, conse-quently, "care-full design".

An integration between the aesthetic and functional nature of design, with an emphasis on prob-lem-solving, is proposed by Saul Fisher. His essay "Design Science and Aesthetics" brilliantly ex-plores aesthetic values' foundational role within the design science framework. This field is concerned with solving practical problems through systematically creating and evaluating artifacts. Fisher

argues for a recalibration of normative frameworks to ensure that we recognize the indispensability of aesthetic values. The traditional view maintains that design decisions are guided by ethical, social, political, and functional considerations. In response, Fisher introduces the "Smuggling Hypothesis". This hypothesis suggests that aesthetic values are inherently embedded in all aspects of design science and should not be treated as an optional criterion (i.e. secondary to values like cost, utility, or ease of use). Aesthetic values are, then, essential to both the success criteria and constitutional design norms of designed objects. Drawing on Van de Poel's work on value conflicts, Fisher demonstrates how design decisions often involve competing values—values that are not easily reconciled. He also argues that standard approaches to resolving these conflicts (such as cost-benefit analysis or maximin strategies) often fail to safeguard the inclusion of aesthetic considerations. This reconceptualization not only ensures a more holistic approach to design but also positions aesthetics at the center of design science's nature and practice.

Michalle Gal's essay critically investigates relations between design and the Western rationalist project. This involves moving away from the integration of function and aesthetics seen in earlier essays and toward what Gal calls a "visualist" theory of design. Visualism endorses externalist philosophy to claim that we are primarily visual beings. Indeed, our engagements with the world mainly originate in the visual sphere and its rich affordances. Visualism stands in contrast to the instrumental rationalism that has dominated the philosophy of design. Gal critiques rationalism by highlighting two pervasive and paradigmatic phenomena in design: (1) the variety of forms that can fulfill a single function and (2) the variety of uses that can emerge from a single form. Instrumental rationalism defines 'design' as a coherent process, one that moves from a rational goal to an object's proper means and use. This involves primarily evaluating design in terms of efficiency. Gal argues, however, that design objects' diverse aesthetic forms and the creative ways that users engage with them do not conform to the instrumental rational plan. Instead, they are guided by aesthetic motivations and the relevant design's visual affordances. She further claims that design objects' multiplicity of forms and emergent uses often play a more significant role than rationality in shaping the nature of design itself. For Gal, these encounters with design objects are intrinsic to our essence and ontology as visual beings. She thereby offers a visualist, anti-rationalist theory of design. This suggests that aesthetics and visual perception are fundamental to both design practice and human nature.

Gregory Galford and Jeremy Barris offer an original and fascinating theory about the relationship between design and meaning. In their essay "Design and the Constitution of Semantic or Conceptual Meaning", they set out to demonstrate that design's stylistic elements constitute semantic meanings, "even when that meaning is strictly of the type we typically think of as independent of stylistic considerations: the kind of meaning which is that of words". Galford and Barris use Robert Venturi's architectural philosophy as a paradigmatic example. This philosophy challenges the modernist pursuit of purity and function by advocating for a richer, more ambiguous expression of meaning through design. Venturi's notion of the "duck" versus the "decorated shed" emphasizes how the value of visual cues and signs in architecture reflect real-life complexity. His work—including the Vanna Venturi House and Guild House—illustrates this approach by incorporating "double-functioning elements" that operate on multiple scales and interpretations. Against the postmodern view of semantic meaning, Galford and Barris maintain that meanings are quite stable and determinant. The authors are critical of Derrida's, Lacan's, and Wittgenstein's theories of meaning, and aim to accommodate the possibility of semantic stability. Postmodernism embraces ambiguity and contradiction, but, for Galford and Barris, it also allows design elements to convey genuine, unequivocal meanings. Thus, the interplay between stylistic features and meanings in both architecture and philosophy underscores a tension between determinacy and indeterminacy. This, in turn, reflects human experience's multifaceted nature.

Gal Ventura also reflects on design and culture, offering an illuminating analysis of the deep relations between design tools and culture. She considers such relations to be exemplified by coordi-

nation between the evolution of parenthood and cradle designs from the modern era, viewing them as cultural artifacts that reflect broader social dynamics. Her essay "The Design of the Modern Crib: Hygiene, Configuration, Materiality, and Social Status" traces the journey from natural sleep practices to the regulated standards of modern medicine. In doing so, she illustrates how cradles (like other consumer goods) serve as both (a) functional objects for infant sleep and (b) tools that shape perceptions of parenthood, domestic ideals, and social status and norms. Ventura emphasizes how infant beds (especially among upper-middle-class families) were designed to confirm class and adhere to health and hygiene practices. Her study also reveals how these beds can mediate human relationships, thereby shaping behaviors and decisions. By examining cradles and cribs through this lens, Ventura offers insights into how they reflect evolving, childcare-related social and cultural settings (e.g. the medicalization of sleep and modern hygiene standards). As cradles became symbols of social distinction, they also came to signify children's growing role in consumer culture. This, in turn, solidified children's status as significant cultural artifacts.

Like Ventura, Yanai Toister addresses the relationship between design and cultural evolution. He does so by offering a new and radical functionalist-technological account of the interactions between photography and design. Toister shifts the focus of photography theory from aesthetics to what he calls "programmatic principles". Rather than looking at photographic pieces, his vantage point in "Design and Photography: Pinhole, Perpendicular, Programmatic" is photography's design and apparatus. His focus is on (a) unique and untraditional kinds, whose post-production images cannot be pre-determined and (b) what can be called "epistemological cameras". Via a historical-philosophical account of photographic apparatus, Toister opens a new path of thought about photography as a medium of design. In doing so, he calls for a thorough reevaluation of photographic education and practice, thereby encouraging investigation into the conceptual foundations supporting the medium. This approach aims to cultivate a profound and nuanced appreciation of design, specifically when it comes to photography's nature and possibilities.

Jeffrey Strayer's essay "Design and Abstraction" closes the collection because it allows us to return to the original design concept as an artistic piece's order and composition. Strayer studies this concept's relation to one of the cornerstones of philosophy and art: abstractness. In analyzing the intrinsic connection between artwork design and abstraction in both theory and practice, Strayer invokes two kinds of design: (1) design as art's form and composition and (2) design as a creative activity, one that involves following a plan for an object's conception and/or construction. This concerns understanding how design and abstraction intersect when creating the most reductive and radical artworks. The essay traces abstraction's development in art history, focusing on the concepts of "something" and "nothing". Strayer argues that producing radically reductive artworks requires more than limiting an object's visible properties. Indeed, it demands an understanding of the necessary conditions for making and perceiving art. Strayer also discusses the deliberate construction of an object's "thisness" and how abstract design can reveal essential qualities. The latter invokes "Essentialism"—an extreme form of abstraction. Strayer concludes by (a) exploring how observers perceive the ideas of "something", "everything", and "nothing" and (b) highlighting the role of language in shaping this kind of perception.

In bringing the above diverse perspectives together, the special issue *Design and its Relations* offers a comprehensive examination of design's multifaceted nature and its deep connections with sundry disciplines and ideas. The essays challenge conventional boundaries, showing how design both influences and is influenced by philosophy, aesthetics, ethics, culture, and technology. By highlighting both theoretical and practical dimensions, the collection depicts design as going beyond conceptions of an aesthetic-functional nature. Indeed, design is deeply embedded in human experience, thought, and social structures. Through these essays, readers are invited to rethink design's role in shaping our world. Design is not merely about objects or visual elements. Instead, it represents a dynamic and evolving discourse—a discourse that engages with the core of what it means to be

human. Ultimately, this special issue underscores the importance of viewing design as an ever-expanding field of inquiry, one whose interactions with other knowledge domains continue to reveal new insights and exciting possibilities.

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## Notes

[1] See Gal and Ventura, 2023, *Introduction to Design Theory*, "Definitions of Design", London: Routledge.

# Design and Definitions: Reflections on the Question of "What is Design?"

## THOMAS LEDDY

**Abstract:** This essay presents the framework of the discourse of definitions and the plausible path to a definition of design, which is classified as a "contested concept". It concludes by trying to supply a possible version of what is called, after Morris Weitz, an "honorific definition" of design, which is a result of the synthesis between the modernist and the postmodernist definitions of design. It is claimed that design is the intersection of modernist functionality and post–postmodernist self–expression across various platforms of consumer products, self–curation, and communities. This formulation shifts the focus from the abstract designer's plans to the particular activities of the users. Aiming to open up a space for an aspect of the theory of design oriented to the user, one that takes into account the relation of design practice to user practice, the essay criticizes the narrow approaches that classify modernist design as paradigmatic to design in general. The author provides an example of this through the daily use of Facebook, as it not only shapes the way we perceive the world and lives our lives but also influences how we design our lives.8

The new definition should reconcile the gap between the modern and the postmodern, by encompassing the interaction of the designer and the experienced world, as it is designed and redesigned by engaged users.

*Keywords:* Design, definitions, contested concepts, modernism, postmodernism, functionalism, Facebook

The opening chapter of Glenn Parsons' *The Philosophy of Design* asks "What is design?" Going back to Socrates, and probably earlier, this is the way philosophical debates begin: "What is beauty?" "What is love?" "What is justice?" "What is friendship?" Before answering the question we must know something about the form of the question itself. The question asks for a description, a definition, of the inner essence of the thing under consideration, or, something a bit different, the essence of the concept. Requests for the essence of the concept are more present-oriented: "what do people mean when they use this word now?" Requests for a description of the essence of the thing are more future or ideal-oriented: "what *should* this word mean?" Keeping the two distinct is difficult since each sometimes disguises itself as the other, and it seems that whenever we look into one we seem to be looking at the other. However the second question is primary in philosophy: seeking for a philosophical definition is quite different from seeking for a dictionary definition.

Not all concepts are up for philosophical definition. We are looking for definitions of what Richard Gallie called "essentially contested concepts," that is, concepts for which philosophers offer competing definitions. (Gallie 1956a, 1956b) It seems like a worthy project. Yet the history of each such effort is usually seen as a history of failures. We see this in attempts to define "art" and "democracy." However, not all philosophers see it this way. Dialecticians, for example, Hegelians and Marxists, see the history of competing definitions as a matter of each successive definition being an advance on the preceding dominant definition, as an antithesis to a thesis, or as a synthesis which

itself is a new thesis. In this paper I will combine a simple version of this approach with the thinking of Morris Weitz on the definition of such "open concepts" as "art" to arrive at a general idea of essentially contested concepts. I will then apply this specifically to the concept of design. Whereas most theories of design focus on genius designers, for example Charles Eames, my concern will be with the user's or consumer's practices with designed objects, practices which piggyback on designers' designs. I will focus even more specifically on user's designing uses of the Facebook platform. I choose this because the dominance of social media characterizes our own era as distinct from ones in which pre-modernist, modernist, and even postmodernist theories of design were developed. My approach is pragmatist in the tradition of John Dewey in that the emphasis is on the interaction of practices and on the relation between these and the experiences of socially connected humans. For Dewey, the artist creates with the view to how the audience will experience, the experience being the key thing. Dewey stresses the continuity of fine art and everyday life. Similarly I will stress the continuity of design and everyday life. Although design may already seem a region *within* everyday aesthetics to some there is a distance here, somewhat like that of the distance between art and life.

"Design" has only recently become an essentially contested concept. There was no philosophical debate over design in the 17ᵗʰ century. But with the rise of mass production, two competing theories of design arose, design as functionality and design as style. (Hamilton) But before going into that, let us step back and consider the nature of philosophical debate over such things as the definition of "design." Philosophers take different views of what is expected of philosophical inquiry into concepts. Parsons, for example, thinks a definition of design in terms of necessary and sufficient conditions is required. Jane Forsey thinks that in the case of design one should just give up on such a definition because design evolves historically. I argue, contrary to both, that the history of such efforts is a history neither of failed efforts nor gradual convergence on the truth but of a dialectical process that is essentially open and unending, but within which we can speak of relative progress. Instead of a history of failures I see a history of more or less successful attempts, each successful in terms of its most relevant contexts of reception, i.e. whether, and to what extent, it was useful and "true" in a pragmatist sense of the term, at a particular time and place. New ages need new definitions of essentially-contested concepts. Also, even though each definition, at one time, came to be seen as a failure by some, there is continued life in each. Past definitions can be reinterpreted and revived. This is part of the idea behind dialectic; that the synthesis is a revival, in some way, of the thesis. Each touted definition in definitional history of a concept is both failure, in that counterexamples and counterarguments immediately emerge, and success, in that (1) a new style of creative endeavor is confirmed and encouraged, and (2) new efforts at constitution and reconstitution of the concept and thing conceptualized are stimulated. That is, success is not only a function of fit to the time and place but also future-directed fruitfulness.

Some believe that the philosopher should stop with describing the current conception of X, for example of design, or at least with describing the concept that makes the most logical sense. It is thought by some, for example, that the philosopher of design should sit back and wait for the designers and design theorists to do the real work of revealing the emerging/changing essence (or concept) of design, and then just describe. But there is also a normative dimension to philosophy: it is not only about what is but is also about what should be. Limiting the philosopher to the descriptive makes philosophy too much like lexicography, and too much unlike design theory and design itself. The philosopher of design and the design theorist are not so far apart as some think. Culturally, we are all in this together. We need to take a holistic approach to culture and definition recognizing that different disciplines often do something very similar but with different vocabularies and in different contexts.

Philosopher of design, design theorist, and designer are all engaged in deeper questions of self-understanding than just asking for a conventional or useful definition of "design." When Adolf Loos (a design theorist and a designer) said that ornament is crime he was making a claim that was part of a much larger critique of his own culture. He was asking questions of the sort "what is culture?"

"what, now, is Europe?" and even "what is man?" Each serious and deep exploration of essentially contested concepts seeks out answers to these, and other questions… by implication. This is why significant designers as well as design theorists can be seen as implicit philosophers of design, and why their writings can and should be taught in a philosophy of design class.

Nor does the philosopher usually stand back, but rather allies him or herself with not simply a descriptive but with a normative definition, sometimes by way of allying him or herself with a certain style or design practice. Parsons for example, begins with a more abstract definition of design in terms of intentional problem solving. Here is his definition: "Design is the intentional solution of a problem, by the creation of plans for a new sort of thing, where the plans would not be immediately seen, by a reasonable person, as an inadequate solution." (Parsons 11) He later clarifies this in a normative way by allying himself with modernism and functionalism. He sees the Modernist movement as a template for the Philosophy of Design. Although he defines design in terms of intentional solution of problems he is mainly concerned with the work of "Designers" (he uses the capitalization).

I have no objection to a theory of design that focuses on designers, particularly on the great designers. In the end, this may be the most fruitful way to understand the changing/emerging essence of design. The problem arises when overemphasis on the great designers may occlude everything else. I seek only to open up a space for an aspect of theory of design oriented to the user, one that takes into account the relation of design practice to user practice. In a Hegelian move, I suggest that Modernism as a theory of design is thesis; that Postmodernism, which stresses the reader, the interpreter, and the user, is the antithesis; and that some sort of synthesis of the two is the next obvious step. The designing activity of the user is of equal in importance to that of the designer.

Modernism and the closely associated concept of functionalism, upon which Parsons mainly bases his analysis, are, simply stated, old-fashioned and outdated. I am not saying that functionalism itself is old-fashioned, but the modernist version of functionalism, i.e. in which "function" is seen in a narrow way, is. Postmodern architecture already posed an antithesis to the modernist ideals of design. For postmodernism, the expressive qualities of decorative symbolism regained a foothold, and strict functionalism receded. But the postmodern reaction was short-lived. It was soon recognized that we need to return to some aspects and some of the terms of modernism, where democratization and less abstracted more concretized functionalism takes the center stage. Here, functionalism should be seen, as Yuriko Saito has recently argued, in terms of larger functions, for example in terms of ecological considerations, especially those that come with the current disaster of human induced climate change. (Saito)

An inspiration for my approach here is the theoretical and architectural work of Leddy, Maytum, Stacey, or LMSarch, on environmentally sustainable and mission-driven architecture where emphasis is placed, as with Saito, on a larger notion functionality, functionality within the context of climate change and contemporary issues of social justice. (LMSarch) I am suggesting that the work of LMSarch implies a philosophy of design (as expressed not only in their designs but in their book *Practice with Purpose*) that points to a synthetic next stage in the dialectic of design. Another inspiration will come from my own experiences with Facebook and reflection on the role of the user in design.

To elaborate: each effort to define essentially-contested concepts like "design" are, at the same time, efforts, by implication, to answer at least some of the really big questions …. for our time. Put in Hegelian terms, Spirit is trying to understand itself, which, in my secular way of looking at things, simply means that all inquirers who inquire in a deep way (i.e. into essences) are trying to take the next step that will, at least temporarily, solve the largest problems of our time, at least conceptually. The exploration of the essence of design in this respect is very much like the exploration of the essence of art.

Parsons, who sees Modernism as a more or less permanent discovery of the principles of design, worries that it might be seen as just another style. On his view, in order to speak of Postmodernism we need to speak of Modernism as having ended, and that this begs the question as to the validity of

its claims. (Parsons 65) In short, "Modernism" could just imply the principles of good design finally discovered by Modernist Designers. And yet, in a way Modernism IS just a style. Not only did it have its moment, it also had its stages. Modernist architecture and design has a distinctive look. Moreover, even though Modernism opposed decoration and ornament, i.e. the non-functional, the importance of detailing in modernist architecture could be said to constitute its own form of decoration.

Each style is itself an implicit definition of design. Each style, in turn, is closely connected with a worldview, with an intuition about the essence of design, among other things, which now has a place in history, although it can still be a legitimate fount of inspiration. And we must not forget that the evolution of design happens very much in tandem with the history of art, where, for example, a style of design like Art Nouveau also had its associated artists and art movements. They even have their associated philosophers: Bergson, for instance, in the case of Art Nouveau. (Braiterman)

Rather than heading to the design section of the Museum of Modern Art to define "design" I begin with a place where design enters into our lives right now. Walking through campus, I notice that fully a third of the people I see are looking at electronic screens. We live today in the intersection between our screens and the world, and the predominant mediation of this interaction are the media platforms we use.

Platforms, such as Facebook, are designed in a myriad of ways and aspects. We do not normally contemplate the design of these platforms as we might the design of a classic car, but they form a pervasive background for our everyday lives. They are not only designed themselves but they also shape the way we see the world and the way we live our lives. They shape how we *design* our lives.

You click on the FB app on your phone. You see a screen with the word "Facebook" on the top left. You see a plus and a magnifying glass. You see a picture of yourself and the famous FB question: "What is on your mind?" You see "Create story" with a white plus on a blue field. You see, swishing down with your finger, a seemingly endless series of posts, some from friends, some from groups, some from advertisers, each with the name of the poster, and most with both images and text. Clicking on your own page you see a picture of yourself, details of your profile, some pictures of friends along with their names, and your own posts going back in time as you swish down again. This page is the one with self-curation in mind. The term "self-curation" is a metaphor drawn from the practice of art curators, and so there is some notion here of arranging presentations of oneself as though one were a work of art, or a show. It implies conscious shaping of an image of the self. It is not normally considered art itself. But the self-created self is something designed by the self, and has aesthetic properties.

But in order to understand the design of Facebook we have to look at how it works in daily use. Take taking a walk as an example. Here I will draw on my own recent experience. When I was younger, taking a walk was just a matter of moving my body through space. But now, usually, I have with me my iPhone. And that connects me to all sorts of things: I can phone my friend, read the news, take photographs, post on Facebook, check the weather, and so forth.

Let us look at one type of act using these technologies in terms of the "What is design?" question. I take a picture of something I find visually interesting and post it on Facebook in a photography group to which I belong. To do this, there is a path I can quickly take through about four steps to the actual posting. Then I can check later to see whether any of my friends have "liked," "loved" or commented on my photo. This can be pleasurable and self-affirming. Admittedly, it can also be addictive, as one can be caught in an endless cycle of checking and re-checking the phone. There is both a positive and negative aesthetic of iPhone/Facebook experience. But let us focus on the way that a Facebook posting can create a world based on materials taken from the world.

Of course what the FB user does is not Design in the sense of the creation of a new kind of thing, as found for example in Parsons' definition of design. (Parsons 9) Creating such a world is not in a significant way like designing the Eames chair. We do, of course, talk about design of the iPhone and of the Facebook site themselves. However what I am concerned with here is what happens on top of

that. So I am speaking of a broader sense of design that includes the designs (not only plans and intentions, but makings) of the consumer.

One dictionary definition of design is "an arrangement of lines or shapes created to form a pattern or decoration." Posting a photograph on FB requires first taking the photograph. Photographers design the pictures they take. They arrange lines and shapes in photography by way of selection of frame and choosing the moment when the shot is taken. They form patterns when taking photographs. This kind of pattern-making is continuous with the pattern-making one engages in when posting photos in such a way as to curate oneself. When engaged in social media people also make choices and form patterns through posting, which is a different kind of pattern from that found in the photograph itself. They digest and consume the world through a process of selective reproduction. These patterns, grabbed from the world and reshaped to their own taste, decorate their FB feed.

This may seem a strange use of the word "decorate." But it points to the thought that designing is not always a form of problem solving. Nor is it always a matter of creating a new sort of thing. One can design a teapot for example in a certain style: such a teapot is not a new sort of thing in any strong sense, even though it is possible to reproduce it. Architecture, as Parsons observes, is often designed with one instantiation in mind. One must of course distinguish between the design as instantiated in the architect's drawing and the design as instantiated in the finished building.

In Facebook there are at least three designers. First are the deep designers of computer languages. Then there is the layer of designers who create the things I see here, the phone itself, the platform with its functionality: the visuals, sounds and feels of that functionality. There is also the layer of my own designing, where I take the photograph and post it. And if I post every day, there is another element of design in this series as a series. These activities are not so easily understood in terms of ideas of functionality.

Such philosophers as Nietzsche and Foucault have famously talked about self-creation as a form of art. Today the idea of the curated self has been applied to social media activities. (Karsch) The social self-presentation through posting is itself curated. It is usually curated to display a life-style, which includes a display of personal taste. Thus there is something fundamentally aesthetic about this practice.

Design may also include what happens in everyday experience in tandem with. As my teacher Marx Wartofksy argued, from a Hegelian-Marxist perspective, the eye itself changes with the means of production. (T. Leddy 2014) My eye has changed in my daily walk as it mediates between the physical world, the city, in which I live, and multiple curated worlds operating on a set of designed platforms, including Facebook. This changes what I see, how I see, and generally how I experience. The means of production changes perception, and perception changes with the Zeitgeist. The Zeitgeist emerges from the relations of production. This is not just effected by a small elite group of Designers. The Designer forms just the basis of a dialectic between Designer and user in which both agents design and redesign the world we live in and experience.

Morris Weitz famously argued that all previous attempts to define art in terms of necessary and sufficient conditions have failed. (Weitz) What is often forgotten about Weitz is that he also believed in the value of what he called "honorific definitions." These are not definitions in terms of necessary and sufficient conditions. They define something in terms of a preferred property. He believed that the previous great theories of art, for example Clive Bell's theory that art is "significant form," should be seen as honorific definitions of art. My historical approach to defining such things as "art" and "design" goes back to Weitz's idea of honorific definitions. In order to create the next good definition of "art" or "design" one must investigate experience to capture the emerging essence, i.e. of art or design. If we follow Weitz the difference between philosophy of design and design theory will not be very strict. An honorific definition calls on us to attend to certain properties. Honorific definitions of design are, then, very much about design criticism and practice. They are normative rather than descriptive.

There is a difference between Weitz's and my own language which should be noted here. For Weitz honorific definitions just are recommendations to attend to certain properties whereas I speak of capturing the "emerging essence" of the essentially contested concept under consideration. Honorific definitions are not valuable just because of reasons given debates over changing criteria of evaluation, as Weitz argues. These debates arise out of different competing visions of the essential nature of, e.g., design. It is competing world views combined with competing practices and experiential gestalts, not just competing reasons and preferences that generate new definitions. Weitz combined with Hegel means that competing theories are arranged historically in a dialectical fashion.

Practical considerations will determine what new philosophy of design is emergent as dominant. It is too soon to say precisely what counts as the dominant theory in 2023. I favor the design philosophy of LSMarch (or any similar design philosophy) where considerations of global warming and social justice are among the determinants. (LSMarch) Although Weitz showed us that, for open concepts like art and design, there is no definition in terms of necessary and sufficient conditions, and none forthcoming, there are definitions that look a lot like that and yet are really honorific definitions. The openness of design as a concept (or "art" for that matter) is a function of readiness of emergence of new honorific definitions in response to situational, cultural and environmental changes.

So we live in this sea of designed things upon which we as a set of layered communities have designed for the delight of each other. These things (in the case of social media) are platforms designed for the practical purpose of gaining revenues from advertising and merchandizing of products, which themselves are part of this important economy of design. We notice however that although this describes design as it really operates in an important aspect of the second decade of the 21st century, it also describes a situation of aesthetic flatness and alienation. Our lives are not entirely meaningless in this situation of design. In this paper I have worked with two paradigms, one of the user's experience in FB and one of sustainability-oriented architecture as practiced by LMSarch. The first is oriented more to self-expression and personal lifestyle, the second to construction of a viable social world.

What then is my honorific definition of design? I don't have one, but I have a rough idea of what it would look like if I did. It would not be a matter of narrow function or of mere decoration. All honorific definitions are inspired by a paradigm, for instance, Clive Bell's honorific definition of art was inspired by Cezanne. Mine is inspired by the design philosophy of LSMarch and by my own FB experience. My working metaphor for design is functionalism within the context of sustainability but with the aura of heightened aesthetic quality. Design is the scene of after-modernist and post-postmodernist functional self-expressive interconnectedness between platforms, consumer products, self-curation, and communities. A new definition is needed that resolves the dialectic between the modern and the postmodern, that describes an ideal of design where depth and reflection are re-introduced and the world re-enchanted though sustainability aesthetically enhanced. The new definition of design would cover the interaction of designer and the experienced world as designed and redesigned by engaged users.

It might be said that what FB users and architect-designed building users do require something more to count as a form of design on its own account. It might further be argued that what is done by users in FB at least is more problem than solution, more negatively than positively aesthetic. The problem with most of the experienced worlds of FB is that they are singularly NOT designed. A critic might see FB activity is little more than the repetitive act of looking at one post after another while responding minimally. After a while it can all get a bit boring. Still, the user's activity can vary, ranging from the banal to something more refined, and this would roughly parallel the range of quality in the appreciation of fine art.

The everyday practice I am describing, a practice of self-design and self-curating (cf. Gianini) within the context of social media and the intersection of that with the worlds of everyday life by way of minor quasi-artistic acts such as taking and posting photographs is, then, not the work of someone called a "designer" or by any sort of design professional. As admitted above, this practice

piggybacks on designs created by professional designers, for example, the design of Facebook. But most things are like that.

Perhaps what I am describing is a metaphor, for designing involves, as Hamilton argues, improving the look of a product through style or decoration (Hamilton 54) and there are no designed products here, except metaphorically the self of the user, or the users experienced world. Similarly, one can seldom see the activity of FB self-curation as problem-solving, except metaphorically as the problem-solving entailed in self-curation itself.

### Conclusion

Before considering the question of the philosophy of design and the question of the definition of design we need to consider the meta-question, the question about the quest for definition itself. There is an alternative to a search for a strict definition in terms of necessary and sufficient conditions. Drawing from Weitz and Hegel we can speak of honorific definitions of essentially contested concepts as competing dialectically over the swath of history and across disciplines. Looking at the debate over "design" we see that something needs to come after modernism and postmodernism. The definition of design need not focus simply on the designer but must reference the user. In the context of architecture, this implies much closer attention to needs, to how users will live parts of their lives in this building, and how this fits into a broader, ethical, notion of function and functionality. In a social media context, it will focus on how the user designs in the act of self-curation.

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# Design and Tacit Aesthetics: Design as the Art of Objects-in-Use

## PAULINE VON BONSDORFF

**Abstract:** Like architecture, design objects are constitutive parts of everyday life: used in various situations where they gain meaning and value. However, while engaging with objects we often do not focus our attention on them but enjoy their qualities as part of performing some action. The practical and the aesthetic merge, and while vision plays a role, touch is more important. The article suggests that the aesthetics of designed everyday objects need recognize a tacit aesthetic dimension, comprising what figures in the background of experience. Tacit aesthetics is discussed based on Michael Polanyi's ideas about the "from-to" structure of knowledge and perception, and Maurice Merleau-Ponty's phenomenology, highlighting the temporal structure of perception. Through examples of Finnish designed tableware from the mid-20th Century, especially by Kaj Franck, it is shown how material, form, and design ideologies interact with patterns of use, informing our aesthetic appreciation and engagement with things.

*Keywords:* design, tacit aesthetics, everyday aesthetics, aesthetic practices, Michael Polanyi, Maurice Merleau-Ponty

## 1. Introduction

Writing on architecture and sculpture, Anthony Savile (1993, 164) made a distinction between architecture as "an art of objects-in-use" as distinct from sculpture. Works of sculpture are objects of visual appreciation without practical function, but works of architecture are more than that. Buildings serve institutional and social functions; they are part of the life of communities. To appreciate a work of architecture aesthetically, as the sort of object it is, therefore implies modifications in our ideas about the functions it serves. As Savile (1993, 176) observes, "the truly architectural masterpiece … fashions … thoughts and emotional responses of ours which impinge on the sort of activity that the particular building houses."

The same distinction can be applied within design, although less categorically. Some designed objects are firmly functional whereas others are intended as, or acquire the status of, standalone, unique pieces and centres of attention. Thus architect couple Alvar Aalto's and Aino Marsio-Aalto's Savoy vase, originally designed for the Paris World Fair in 1937 (e.g., Michl 1991), has since become a common object in many Finnish homes, while retaining its status as a thing of beauty. Finnish designer Kaj Franck's decanter "The Bells of Kremlin" (1958–1968; Collection Kakkonen: https://collectionkakkonen.fi/fi/pieces/kremlin-kellot/), originally meant for fruit syrup and water, has travelled the other way and is today an expensive collector's piece that few people would use when serving juice. Franck's Kilta tableware series (1953–75; Vihma and Yli-Viikari 2011), likewise a classic, has, on the contrary, retained its position as a functional part of everyday life, i.e., as objects-in-use.

Unique design objects are primarily there to be displayed and admired by looking whereas users engage with everyday design objects through handling them. As part of intentional, practical ac-

tions we touch, move, grip, hit, lift, push the objects in ways that have become so habitual that we often barely notice what we do, let alone reflect upon it. To do justice to our appreciative engagement with everyday design, we might need to rethink the relationship between the practical and the aesthetic and develop a theory that recognises their entanglements. Steps in this direction have been taken in the aesthetics of agency (Nguyen 2020) and in everyday aesthetics (cf. Saito 2022). In my view, we should recognize that practical action and aesthetic appreciation often feed on each other; everyday practices often have an aesthetic component, and they can evolve into aesthetic practices (cf. von Bonsdorff 2023).

The line traditionally drawn between the practical and the aesthetic is connected to the line drawn between sense modalities. Traditionally, Western aesthetics used to privilege the arts of the so called "higher" senses, i.e., vision and hearing, which do not presuppose direct contact with the object that produces the stimuli. The three other senses in this scheme, touch, smell, and taste were considered "lower" because they were seen as closely connected to bodily pleasures. In his seminal aesthetic theory, Immanuel Kant drew upon this model when he described proper aesthetic pleasure. With the lower senses, we are both directly affected by and interested in the real existence of objects, which makes these senses unfit to provide disinterested attention, a hallmark of aesthetic judgment proper (Kant 1990, §§ 1–5). Reflective appreciation, essential for aesthetic judgment, is hindered by embodied entanglements with objects.

Against Kant, I shall argue that touch and our practical engagement with everyday design objects are both essential for and co-exist with our aesthetic appreciation of them. Yet these aspects have been marginalised for philosophical and other reasons, such as the increased role of visual images in marketing and selling. Furthermore, I show how our experience of handling objects of everyday design contributes to reflective awareness. My approach entails that we conceive the enjoyment and appreciation of everyday objects as more than either singular events or encounters between a subject without experience and an object without context. The latter approach is typical for modernist aesthetics, exemplified by critic Clement Greenberg's (1960) analysis of painting as purely optical, untainted by tactile and other associations (for a critique, see Krauss 1990). I suggest, on the contrary, that we engage with everyday objects in ongoing activities, through variously tuned cultural practices, and influenced by cultural and personal habits, memories, and values. All this informs aesthetic perception, experience, and judgment.

Instead of "lower" senses, it might be more appropriate to refer to certain sense modalities as tacitly sensed. On the other hand, tacit and focal are not fixed but depend on where we direct attention. In the following, I start by outlining the idea of tacit aesthetics, referring to qualities we mostly do not consciously think about, but which influence our experience of objects or situations. The tacit dimension is especially relevant for how we aesthetically experience the everyday and environments, where we usually do not focus on objects in the way we do with art. Through Michael Polanyi's discussion of the tacit dimension and Maurice Merleau-Ponty's phenomenology, I show how the scope of the tacit reaches beyond sense perception. Among sense modalities, touch often functions tacitly. With examples from the sphere of household utensils and tableware I show how materials and forms interact with use and enjoyment, reinforcing and transforming contexts of use, contributing to atmospheres, while also carrying design ideologies with them. Much of this is, however, tacitly rather than explicitly present to users. Finally, all my examples have some sort of charm – a phenomenology of charmless objects would be different. Most of them represent a golden age of modern Finnish design, the post-war period, with some anonymous items included.

## 2. Tacit aesthetics

The familiar list of five senses - vision, hearing, touch, smell, and taste – by no means covers how we gain sensorial information about the world. Our sense of balance (the vestibular system) and of movement (kinaesthetics and proprioception) are, for example, missing. On the whole, touch is a

rather crude term to cover many of the sensations we have when handling things, which cannot be located as belonging to any other of the five senses. However, adding more senses to the list does not solve the problem if the list itself is part of the problem, as I argue.

First, approaching the senses through different organs or capacities leads to a fragmented and mechanistic model of perception with little potential for elucidating what is going on when we perceive, attend, act, or just are in some place. Second, studying the senses separately tends to come with a mechanistic model of the mind, whether empiricist or computational, and mind–body dualism (for critiques, see von Bonsdorff 2020; Stock 2016; Gabriel 2015). This is not to deny that receptors receive data that is processed in the brain. The point is that research on these mechanisms explains the physiology but not the phenomenology of perception. As classical authors such as Maurice Merleau-Ponty and J.J. Gibson argued, we do not perceive sense data; we perceive the world and things in the world (Merleau-Ponty 1992; Gibson 1966; Covarrubias & al., 2017). We therefore need a more holistic approach, one that recognizes interactions between sense modalities, but also how perception is both active and influenced by earlier experiences and internalized values. Tacit aesthetics is a contribution to this field.

To give an example: when I lift a Teema mug with mint tea to my lips, having just come in from two hours of physical work outside, I feel the weight and smooth surface of the mug, and the scent of the tea, but also the tiredness in limbs and joints and a sense of contentment about the moment of rest. I sit down, the wooden chair softened by a cushion that warms my buttocks, tired from pushing the wheelbarrow uphill. I enjoy the simple design of the mug; an enjoyment informed and deepened by tacit awareness of having by and large inherited the taste of my architect-mother, but also by awareness that I planted the mint that thrives under the lilacs. Moreover, the scent of mint is both contrasted and connected to that of the horses, including manure and hay. I munch the mint leaves as horses munch hay: earth connects us.

Understanding perception in a more integrated, broader but also deeper way is important for understanding the aesthetic and use values of everyday design objects, where appreciation comes through an intimate engagement while using the objects. Gibson's ecological theory of perception (1966) was an important step in this direction. He proposed that we consider the senses as perceptual systems, not separate senses, that together serve an organism in exploring its environment. Vision and balance, touch and vision, etc., inform each other. As we focus on certain things in our perceptual field, many other sensations nevertheless influence our sense of the situation. We can think of tacit aesthetics as a form of aesthetic enjoyment which is not produced through focused attention but is felt as an integral part of a situation. For example, we feel at ease in a room, without being able to explain why. The feeling can be a sum of the quality of light, acoustics, the shape of the room and its elements, and other perceivable features which are not beyond analysis, although we may not initially be conscious of them at all. As Peter Zumthor (2022, 13) writes, "I enter a building, I see a room and sense the atmosphere, and in fractions of a second I have a feeling for what is there." The tacit aesthetic can also rise to consciousness and reflection momentarily, as when I enjoy the kind dignity (metaphorically speaking) of my coffee cup while raising it to my mouth. We can have a similar relationship to public works of art whose presence we enjoy, e.g., on our way to work and while simultaneously thinking about other things. This is like nodding to an acquaintance.

In Michael Polanyi's philosophy, 'tacit' has a meaning that goes far beyond perception in the narrow sense. In *The Tacit Dimension* (1966) he points out that all knowing and thinking, in addition to being intentional, is "necessarily fraught with the roots that it embodies. It has a *from–to* structure" (Polanyi 1983, 10). In other words, whenever we think of something, say something, or attend to something, whatever the object, we do so from a background of internalized knowledge and beliefs. To further explain the from–to structure, we can compare it to Polanyi's analysis of focal and subsidiary awareness in *Personal Knowledge* (1956, 55-56).[1] Thus when using a hammer, we are focally aware of how the hammer hits the nail and subsidiarily aware of muscular action and tensions

in our body. Subsidiary awareness enables us to use the hammer and adjust our movements to its balance and weight, but we do not pay attention to it. If we did, the action would be disturbed. We are focally aware of the object, and subsidiarily aware of the instrument. In *Personal Knowledge*, Polanyi described the two kinds of awareness as mutually exclusive, a view he later revised.

In *The Tacit Dimension*, Polanyi (1983, 6-7) emphasizes that tacit knowing operates in the theoretical as well as in the practical field. He also adjusts his view of the relationship between the subsidiary and the focal or, with the terms he now prefers, the proximal and the distal, no longer describing them as mutually exclusive. The proximal can figure in awareness, but holistically. Describing the "phenomenal structure" of tacit knowing he writes (1983, 11): "we are aware of that *from* which we are attending *to* another thing, in the *appearance* of that thing." For example, we perceive a face as expressing a mood without being able to specify what features make us recognize that mood – although they are all in view.

Now in the aesthetic context, perception is precisely about overall appearances, including expressive aspects. With a view to tacit aesthetics, I suggest that perceiving everyday objects as cultural objects, rather than just tools, activates manifold contexts, where sense experience, patterns of use, internalized values and design ideologies together constitute the tacit dimension from which we perceive a particular object. Moreover, as part of everyday life, the objects appear in individual situations, as in my example of the mug with mint tea above.

The holistic and entangled, although mostly tacit, character of our experiences with everyday design calls for some adjustment of Polanyi's conception of the personal. He distinguishes the personal, entailing choices, commitments, and values, and the subjective, referring to desires, ideas, and feelings we are "subject to" (Polanyi 1956, 301-302). However, especially with a view to aesthetics, the distinction is hardly applicable. We tend to be more affected, positively, or negatively, by things we have a readiness to value, based on previous experiences and knowledge. On the other hand, commitment often grows through experiences we have not chosen but have been unexpectedly "subject to".

Since for Polanyi all knowing, including the tacit, is personal, the tacit dimension includes social practices, norms, choices, as well as elements of self-education. Personal knowledge is more than practical knowhow of, e.g., how to lift a cup to one's lips, aware that coffee can be hot. In the context of everyday aesthetics, aesthetic choices at least in some cases include commitments that go beyond the immediate level of sense perception and pleasure. It is a question of what we perceive in what we perceive, informed by the tacit dimension.

Let me add some observations on the role of tacit aesthetics as part of action and performance. Polanyi (1983, 18) suggests that "[b]y concentrating attention on his fingers, a pianist can temporarily paralyze his movement". However, this probably happens only if the pianist attends to their fingers in an objectifying way, separating the movements of the fingers from what they are doing: performing a piano piece. Within the performance, as an aesthetic act, the pianist is, on the contrary, conscious of their fingers (hands, arms, legs, body) as an integral part of how they play. As we recognize that aesthetic enjoyment can be about performance and agency rather than objects only (Nguyen, 2020), we also realize that the tacit dimension comprises skills with cultural meaning. In the more practical context of handling everyday objects, awareness of *how* I perform my actions can likewise be present, as I shall argue in Section 4 below.

In the aesthetic context, Polanyi's theory of the tacit dimension need some adjustment and elaboration, as I have suggested. His basic idea about how our attention shifts between levels, and how we "dwell" in whatever is at each instance the proximal term (Polanyi 1983, 16), is however fruitful. It also harmonizes with Merleau-Ponty's phenomenology on a fundamental level. Merleau-Ponty (1992) explored perception with unsurpassed versatility, extending its scope from epistemology to ontology especially in his late period (Merleau-Ponty 1991). One of his most important contributions was to foreground the temporal and layered character of perception, using key terms such as

"sedimentation" and the "perceptual arc". Sedimentation points to how meaning is layered; in the case of everyday design through repeated and varied situations of using an everyday object, including emotionally charged and memorable occurrences. When we use the object, our earlier shared history is present as an echo we can attend to, but it need not figure clearly in our mind. The perceptual arc points to the halo of meanings stemming from former experience that, as it were, surrounds us. It could be added that with things, the concrete object can be a token of a type rather than a singular object, as when someone exclaims "my Granny had similar cups".

In his last period Merleau-Ponty (1991) introduced the key term "flesh", thereby suggesting that the world, as it exists for humans, is dynamic and "alive" but also opaque in ways that make it similar to us. Like Polanyi's proximal and distal, flesh indicates shifting relationships of attention. But flesh is a more radical, holistic, and fundamental concept, emphasizing the ontological reciprocity of perceiver and perceived. In this period, Merleau-Ponty abandoned the terms subject and object as too dualistic. When I use them here, they should not be taken to imply ontological dualism but two poles in a shifting relationship. While it includes the chiasmatic shift between active and passive touch (cf. Gibson 1962), it also points to a "hidden depth" of objects and of us. Further on, I shall reflect on how aesthetic qualities of objects can suggest such depths, and what it contributes to experience. For now, suffice it to say that everyday objects do not exist just here and now, serving certain purposes. They can carry past and future with them and are by no means always trivial.

Merleau-Ponty (1992) writes about how, while sitting at his desk, he reaches out for his pipe, almost without the need to look at it. He knows it is there and so his hand can perform the movement of grasping it. We can imagine the enjoyment in the movement, the contentment of feeling the round familiar shape and warmth in the fingers, the ritualized act of inhaling and sensing the nuances of the tobacco in the mouth, stimulating thoughts even before the nicotine chemically effects the body. Expectations and experience are part of the situation. For Merleau-Ponty, perception is part of our being towards-the-world (*au monde*) rather than just being in it, as if in a container. Perception is an ongoing dialogue with the world, a reciprocal process of active exploration and reception already on the muscular level of "motor intentionality". In fact, for Merleau-Ponty (2011) perception is already an articulation of the world that is at the same time a transformation, even expression.

The pipe illustrates the multimodal character of perception. It has a particular color, smell and feel, and these qualities become associated, giving rise to acquired synesthesia based on experience and associations (cf. von Bonsdorff, 1999). In a similar way, the pipe can carry a promise of happiness, of imminent pleasure. Such expectations are part of reaching for the pipe, of lifting and lighting it. The movement is habitual but invested with meaning, where previous experience is merged with present intentions. Merely by looking at a familiar thing, we are reminded of its feel, smell, and functional roles. This is, in the aesthetic realm, the "from-to" of the tacit dimension.

## 3. The touch of things

We engage with household utensils and tableware, and with most other objects, using our hands and bodies to grasp, move, lift, clean, etc. For example, lifting a kettle with hot soup may include grasping its ears with mittens on our hands, feeling the warmth and weight of the full kettle while balancing it, the steam in our faces and the scent in our noses. We also use muscles in our arms, torso and legs to secure balance and support. In an article from 1962, Gibson pointed out that among the senses, touch has been understudied. Moreover, it has been poorly understood, for it comprises a wealth of both exploratory actions (active touch) and receptive sensitivities (passive touch) (Gibson 1962; cf. Carello and Turvey 2017). Many of these play a part in lifting the kettle. When I refer to 'touch" in the following it should be understood broadly, as including a variety of bodily sensations. Whenever relevant, I will be more precise, also to remind about the spectrum of sensations touch comprises.

In this section, I make some observations on the tacit dimension of everyday objects used for cooking and at meals, focusing on qualities these objects have regardless of how we use them just

now. This includes materials, colour, and form, communicated to us through touch and vision, handling and looking. Yet each individual item also has a life history, and some of this narrative can be visible as marks. They can also be the fruits of specific design philosophies, such as Scandinavian functionalism that shaped and was shaped by Kaj Franck (Aav and Viljanen 2011). Following the insight that we perceive objects, not sense data, and that household utensils normally have sedimented meanings, often originating in repeated practices of use, I use concrete examples. They are meant to exemplify how various kinds of meaning and value become tacitly part of such objects. To indicate their rich layers of meaning, concrete and contextual, I refer to objects as things. Incidentally, in Scandinavian languages "ting" can refer to both objects and gatherings.

We touch materials, but how we experience them is co-dependent with form and context. The shape of the red plastic tumbler (designed by Tauno Tarna in 1969 as part of the Katrilli series, in production by the Sarvis company 1969-1985) that I use while travelling makes it easy to handle and stack. Its lightness is due to the material and communicates a carefree tone, because we know how easily glassware is broken. This item is strong, the plastic thick enough, and its base is wide enough to stand firmly. The same shape was earlier used by Saara Hopea for glassware. In comparison to glass, the plastic appears opaque and one-dimensional, appropriate on a train or on a picnic but out of place on a table. The one-dimensionality of plastic is at least in part due the homogeneity of the material. There are no variations in colour, no stripes, no traces of production other than the factory stamp at the bottom. In a sense, the object is perfect.

Wood is comparable to plastic in lightness but on the opposite side when it comes to variations in the material. Wood utensils for cooking and eating are unpainted, and therefore the veins are visible. In addition to forming interesting visual patterns, they remind of the organic origin of the material, which is at the same time the prehistory of the object. Through its material, each wooden object, even an eating stick, is individual and we know its organic origin in principle. In this respect, our "common sense/scientific knowledge" of nature that Allen Carlson (1979, 273) suggests is relevant for the aesthetic appreciation of environment, informs our relationship to everyday objects.

In comparison to many other materials used for cutlery and cooking utensils, wood is soft, which makes it subject to wear and tear. Wood may also be rather unique in our acceptance of its olfactory qualities: the faint smell of fresh wood, of oils or other food that have touched the objects. Wooden ladles, forks and spoons may be light-coloured when we buy them, but with time they turn brown, especially the bowl, from contact with food stuff. Due to the objects' vulnerability incidents can be preserved as visible marks, as in the injured bowl of a ladle, caused by a grandchild in her early years. The ladle is still in use, each time reminding of the rough play. The object has both a material prehistory and a life history as a household object. Both are part of its tangible individuality and temporal depth. Of course, at some point, we may think the object is broken and throw it away. Yet wear and tear can also be part of the object's tacit narrative aesthetic value, just like "weathering" in architecture (Mostafahvi and Leatherbarrow 1993).

Wooden objects can also show signs of making, such as traces of carving. In hand-blown glass, we can spot small bubbles that in fact move upwards, although at an extremely slow pace, way beneath what the eye can perceive. These traces of a manual process of production have an effect comparable to Roger Scruton's (1979, 206-236) arguments about the importance of the "sense of detail" in architecture, reminding of skill and care in the process of production. However, while Scruton points to intentional articulations, I would like to extend the argument to embrace the communicative value of unintentional traces of the production process. Indeed, bubbles in glass, when not part of the design, can be seen as signs of imperfection. Perhaps the reassuring quality of an object's beauty spots is that they make us feel at home. As individuals, we share in imperfection, not in perfection. The unfinished is part of life, while the finished and perfect is dead.

The tacit includes sense impressions that build up and become part of the sedimented meaning of objects, but also other kinds of contextual knowledge that can change. In a context of design – and the

ladles are examples of vernacular design, or craft – materials are not just dead matter. Today the ladles, especially if we know they are locally produced, take on new meaning as small-scale carbon sinks while their low-tech character gains new significance. On the other hand, the plastic designs from the 1960s and 1970s represent the utopia of an easier life, liberated from bourgeois rules of appropriateness. Franck's plastic tableware from 1979 was called Easy Day (*Pitopöytä* in Finnish, referring to the buffe table at a celebration; Franck 1992, 9). The objects are durable and honest. Regarding the present ubiquity of oil and plastic, sometimes mixed with other materials and made to look like wood, their proud plastic aesthetic appears refreshingly straightforward, although perhaps naïve as well.

The post-war period in Scandinavia is well-known for prize-winning designs, for example in the Milan Triennials of the 1950s. In Finland, Kaj Franck represented an approach that combined harmony and beauty with social responsibility, in the spirit of "more beautiful everyday goods", a slogan coined by Swedish Gregor Paulsson in 1919 (Creagh & al., 2008). In a country with huge war debts, there was a scarcity of materials but also an experimental spirit and a willingness to design life from a new and sounder basis. Teamwork, anonymity, and the designer's knowledge of how objects should feel when we use them are part of this. Design was not just about looks: thus Franck was not content with the weight of knife handles, the depth of spoon bowls, and the prongs of forks in the Scandia cutlery set (in production by Hackman 1952-89 and 1996-2000; with size alterations by Iittala from 2016), and therefore renounced his share in the sales revenue (Aav 2011, 34). My architect mother, on the other hand, appreciated the Scandia spoons precisely for being "mouth-friendly". It is of course hard to say how aware users are of the ideological context, but with growing popularity and collecting, awareness increases. Dwelling with the things, we also dwell with their background.

Relevant contextual knowledge can also be added retrospectively to objects. For example, I bought thick, coloured glasses from flea markets in Helsinki in the late 1980s, in the Kallio district that was undergoing a slow change from worker to hipster area. Only recently, I learnt that they were designed by Franck (Tumbler 5023, 1953). This adds to their value, but so does, and at least as much, the possibility that some of them were used by people with little income and recent experience of the war, in a city still partly in ruins. As designed objects, the glasses invite prolonged touch and vision, awakening the pleasure of being "skin to skin" and suggesting something special in the everyday. History, known and imagined, is part of their tacit dimension too.

## 4. Spirals of use and enjoyment

Things may have specific roles in the life of a family or a household. Some are used daily, some only on special occasions. Sometimes particular items are used according to the mood of their owner, to produce a special atmosphere, or for nostalgic reasons. But things also both demand and inspire different patterns of use based on qualities that have been revealed in user experiences, including touch and movement.

Above, I pointed to material qualities of objects, that is, properties they have regardless of how they are used. This is to some extent an abstraction, as everyday objects are part of our lives precisely through being handled. Through a few examples, I shall now discuss how designed everyday objects orchestrate life through suggesting ways of being handled, thereby influencing domestic "social choreographies", i.e., patterns of movement and social interactions (Hewitt,2005; Cabeen 2024). As they do this, they take on additional meaning that becomes part of them as things and is tacitly present when we engage with them. This can lead to an aesthetically and ethically benevolent circle of use and appreciation, where how we use objects reinforces appreciation and vice versa.

Among the sets of tableware Kaj Franck designed, the Kilta ("guild", in English), with its follower Teema ("theme" in English) and the Sointu ("chord" or "harmony" in English) are among the best

known (on the two former, see Vihma and Yli-Viikari 2011). Kilta comprised flatware as well as serving dishes, cups, saucers etc., whereas Sointu was for coffee and tea. The items are in one colour; Sointu in pastel nuances with a stripe pattern and Kilta in rich nuances of brown, black, blue, green, and yellow. The idea was that items in different colours can be combined, also with older dishes in the household. Kilta items were sold as single pieces, which was new at the time. While Sointu, delicate and refined, appears tailormade for peaceful, perhaps shared moments of having coffee or tea, Kilta is both rustic and flexible, epitomising the everyday. However, their appropriateness for different occasions is about more than looks.

Comparing tableware for coffee, the Kilta objects are thicker, without being heavy, while Sointu is thinner, and this affects how we handle them. The movements they invite are different, and so are the sound they produce. In Sointu, cups have saucers, which demand more precision when the cup is put down. Because they weigh little, the movement of lifting and putting down the cup is more of a pure movement, without any muscular effort of lifting. When the cup, held by the ear with one hand, is put down on the saucer, the sound is delicate and may include a faint clink. The Kilta cup is not heavy, yet when put down on its saucer the sound is straightforward and lower. And since the saucer lacks indentation, the cup need not seek its right place. The overall impression Sointu gives, due to a delicacy in weight, form, and colour, is to be handled with care and used while sitting at a table.

Kilta cups and Teema mugs travel effortlessly inside a house with their user, or even outside; they can be put down in many places. Features such as these affect the modes and rhythms of having coffee or tea. Thus, the tacit aesthetic of everyday objects is jointly about material qualities and performance. Naturally, tableware gives rise to different patterns of use in different households; yet their design will encourage certain types of acts rather than others.

When we handle objects that we like, the patterns of use are also patterns of enjoyment, where material qualities merge with sedimented meaning, including memories of situations where the items have been used and perhaps admired. We tend to form habits with certain objects, using them in special situations. As objects in use, they contribute to articulating the everyday, to giving it rhythm and form that can then be varied. We arrange objects, set the table for display and eating, and do this with a view to our own mood or the atmosphere we wish to create. Atmosphere has been suggested as a key term for aesthetics by Gernot Böhme, who describes it as the sum of what an object or space communicates to us through embodied, perceptual experience, including cultural meaning (e.g. 1998, 2001; cf. Zumthor, 2022; also Griffero 2010). Atmospheres have a variety of ingredients but are sensed immediately. I suggest that we also transform them in largely tacit ways, through internalised patterns of use that can be adjusted according to the situation.

How is the aesthetic situated in these situations and practices? It seems that it is inseparable from the functional or practical dimension. The aesthetic is in the style and mood, in the how rather than the what of situations and actions. It accompanies what we do. That it is part of the practical, and tacit, means that it is simultaneously an aesthetics of agency and one of objects (Nguyen, 2020). Over time, this merge of performative and appreciative action can give rise to aesthetic practices, e.g. regular joy in setting the table with familiar objects but with an eye for variations. The relationship between the things and how we handle them is reciprocal: we choose certain object for certain occasions because of how they feel, and then the occasions are modified through the objects. Some glasses demand to be lifted and put down slowly, some held by the foot, some with the whole hand.

## 5. Conclusions

Tacit aesthetics is a multi-layered concept. First, it is related to sense modalities that tend to be marginalised in a culture where buying and selling are increasingly mediated through images. In addition, there is the tradition within Western aesthetics to privilege vision at the expense of the other senses. Second, the tacit reaches beyond sense perception to our former experience with things, as well as to hopes and expectations. Here it is clearly personal and demands a first-person

aesthetic understanding. The meaning of a thing for one person differs from its meaning for another, but they are similarly structured and intimate in character. Meaning dwells in the thing and touching it, we can touch and be touched, reciprocally, by deep layers of memory and values. Third, tacit aesthetic enjoyment is merged with practical action in situations where we use or handle things. The appreciation can rise to the foreground momentarily while we do something with the thing, but typically enjoyment is subsidiarily present all the time. This is one way in which cherished objects add to the quality of life, where they can give rise to positive circles of use and enjoyment.

Through observations on forms and materials and on how we frame utensils through practices and narratives, I have argued that the aesthetic appreciation of everyday household utensils is often tacit, but that tacit appreciation is as significant as reflective. These reflections are, perhaps needless to say, applicable mutatis mutandis to other groups of design objects.

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## Notes

[1] Polanyi's analysis is very close to Martin Heidegger's analysis of tools in *Sein und Zeit*, but I have not found references to Heidegger in Polanyi.

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# Design and Aesthetic Appreciation: Form, Functionality, Performativity

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**Abstract:** This essay explores the aesthetic dimension of design objects, which delivers properties as emerging from considerations of their formal aspect as well as their functionality and actual use by each individual. I analyse accounts of formal and functional properties in design as alternative views given for the aesthetic evaluation of design objects yet marking how both address the contemplation of the design object. However, I consider extending the aesthetic appreciation to the properties that emerge during the user's active interaction with design objects. My view is that the global aesthetic value of design objects is the result of the intersections between these different sets (formal, functional, and performative) of properties. The aesthetic evaluation of design objects is, in that sense, pluralistic and variable, according to the particularity of the items in question.

*Keywords:* aesthetic properties, aesthetics of design, functional beauty, performative aesthetics

The term "design" refers to a certain class of objects and the practices that produce them. Said objects are all sorts of things that surround us; we find them in our homes, our workspaces, our towns and practically wherever we go: furniture, kitchenware, clothes, vehicles, buildings, computers, websites, and so on. These things have in common that they are artifacts planned, manipulated, and mass-manufactured in order to fulfill utilitarian functions that satisfy what humans may need or want; therefore, they are objects to be used and interact with. There is almost no part of our daily lives that is not mediated by design objects and so, their ubiquity and importance for the quality of human life is often pointed out. However, despite their ordinariness and functionality, these objects have an appearance that may be significant, subject to our aesthetic experiences and judgements, therefore, that also seems rather important in our interaction with them. Indeed, in some sense the term "design" is strongly focused on the look of the artifacts and there are institutions, such as museums, that bring the aesthetic value of some designs to the fore. The evaluation of design objects may then be seen as a composite of the different values that this practice comprises, among them functional and aesthetic value, not without tension between them.

Traditionally, aesthetic value has been understood as grounded in qualities or properties *of the form* of the objects which one attends without any concern for, perhaps in opposition to, practical goals or utilitarian interests. Design objects may have aesthetic value even when, typically, we take a practical attitude towards them. Some accounts have contended that the properties of the form are secondary, or dispensable. Modernist movement made function the central concept of good design in contemporary culture; rejecting ornament as expression of past times, the claim was that beauty simply follows functionality. Although this famous Modernist slogan has been widely contested, some recent theories allege that nonetheless functionality is somehow a source of aesthetic value. Accounts of functional aesthetic value, such as Stephen Davies (2006), Glenn Parsons and Allen Carlson (2006), and Jane Forsey (2013), provide a framework that affords the appreciation of properties that otherwise will be ignored. Furthermore, since functionality is central to design, they offer an essential guide to the correct aesthetic appreciation of these sorts of objects.

Finally, aesthetic properties would also emerge during the user's active interaction with design objects, salient in the self-reflective aesthetic appreciation of such activities. This perspective adds up to what can be called *performative* aesthetic properties, which will further enrich our view of the aesthetic field and broaden the range of properties than inhabit it.

My aim in this essay is to explore the aesthetic dimension of design objects, which delivers properties as emerging from considerations of the objects' formal aspect but also their functionality and actual use by each individual. My view is that the global aesthetic value of each design object is the result of the intersections between their different sets of properties, reflecting the complexity of the appreciation of how they aesthetically appear to us. The aesthetic evaluation of design objects would be, in that sense, pluralistic and variable. That is, considering that the category of design covers a highly extensive and diverse range of items (from those with the dullest look to those more decorative and "artistic"; susceptible to being addressed from more or less interactive and contemplative perspectives), the importance or weight of the different aesthetic properties, as belonging to each of the three groups mentioned, would then vary according to the particularity of the designs in question.

As brief description of my plan, I must first explain why, having different sources, properties of the three groups can be considered aesthetic all the same. In section one, I sketch a view of aesthetic properties and experience that can apply to the accounts of formal, functional, and performative properties in design that I give in each of the following sections, with some final remarks about what a pluralistic and variable aesthetic evaluation of design objects would look like.

## 1. Aesthetic properties

Addressed in relation to the objects' forms, their functions and the actual interactions with them, the properties I am concerned with must be nonetheless *aesthetic*. Although, there is no unified view of aesthetic properties, a wide variety of theories conceive aesthetic properties as "response-dependent", that is, recognized in the experience of an object that, therefore, requires first-personal acquaintance of said object. However, aesthetic properties do not intend to refer just to mental states. Insofar as the responses are directed to the objects, aesthetic properties emerge as the merited response to certain objective features that elicit them; in this sense they are still somehow object-centred. So defined, aesthetic properties are often considered dispositional properties: steady dispositions in objects to cause certain reactions in suitable qualified observers. I think that the description of aesthetic properties given by Robert Stecker's *Aesthetics and the Philosophy of Art,* Glenn Parsons' *The Philosophy of Design,* and Thi C. Nguyen's "The Arts of Actions" are compatible with this understanding of aesthetic properties. And so, my analyses of formal, functional, and performative aesthetic properties of design will refer a great deal to their respective theoretical accounts.

But lets start by recalling that, at least since the influential work of Frank Sibley reinvigorated the interest in the plurality of aesthetic properties beyond the beautiful and the sublime,[1] aesthetic properties have been understood at the core as a matter of perception. Although, whereas non-aesthetic properties (for instance, being "heavy" or "rectangular") would be noticed by anyone with normally functioning senses and who is paying sufficient attention, the aesthetic ones (like being "monumental" or "austere") wouldn't be so easily detected, as they require the exercise of certain sensitivity that Sibley, recalling the classic term from the eighteenth-century tradition, labelled "taste". After Sibley, most defenders of aesthetic properties appeal less to taste than to a certain sort of experience in order to explain how aesthetic properties are so perceived as they emerge from a non-aesthetic base, but they are not inferred from it. This means that non-aesthetic features are *never* sufficient condition for aesthetic properties and this underdetermination leads to the possibility of facing persistent aesthetic disagreements among perceivers. But it also means that such disagreements would only be genuine if we assume that people that disagree cannot be right at the same time about the *same* thing, so there must be at least a chance to set up the dispute over the description of that which in principle we all could perceive, inasmuch as we are suitable perceivers. It is thus

admitted that aesthetic properties are not appreciated in the mechanical or natural response to the physical features of objects because our different sensibilities, circumstances and context of appreciation affect our perception. Moreover, some background knowledge on the type of object in question is also commonly admitted as necessary for a correct aesthetic appreciation of the objects. In fact, nowadays, many accounts of aesthetic experience distinguish a "perceptual" from an "experiential" account of aesthetic properties that includes not just sensory perceptible properties but also expressive, representational and symbolic properties as they are realized in an item captured not only by our sensory perception but also our thought and imagination.[2] Since our experience does not have to be neither only nor primarily perceptual, we can appreciate aesthetic properties in the imaginative experience of novel plots but also in the mental representation of a mathematical proof or a chess move. In short, aesthetic properties are properties of how objects of the senses, the imagination and of the intellect *appear to* us.

Now, as Robert Stecker points out, for our experience to be aesthetic, we must take satisfaction, or dissatisfaction, from the appearance of these objects "for their own sake" (*Intersections*, 24) and so guarantee the autonomy of such experience. The influential view of Kant's *Critique of Pure Judgment* established "disinterestedness" as the requirement for the autonomy of aesthetic pleasure. According to Kant, aesthetic judgments are subjective, as they are based on a felt response of pleasure, yet claim universality, since humans *a priori* share the same mental faculties and ought to respond similarly insofar as our judgements are independent of any interest, sensual, practical or theoretical; that is, our aesthetic judgement must respond only to the form of objects in the absence of the perspective of any further benefit or advantage that they might bring us. However, Kant's conception of disinterestedness seems particularly strong about its demands and would be built not just in the exclusion of but in opposition to any instrumental use of the object in question.[3] This operates a separation from the everyday world that, like others, Stecker thinks is mistaken. Among its consequences, a restrictive attention to (an equally mistaken mystical view of) art and nature has been given in detriment to many other, practice oriented, things that equally deserve to be considered proper objects of aesthetic appreciation. Instead, Stecker proposes dropping the notion of disinterest and formulating the autonomy of aesthetic value in terms of an experience valuable for its own sake that is compatible with its being *also* instrumentally valuable, or valuable for something else (*Aesthetics,* 54) and that permeates our lives inasmuch as it can happen anywhere.

From here on, I will align with Stecker and affirm that aesthetic properties are appreciated in a sort of experience that focuses on forms, qualities, or meanings of objects, and their interrelations, which we appreciate for their own sake.[4] Consequently, the aesthetic value of an object, compatible with its instrumental value, is measured by the value of the experiences that those forms, qualities, and meanings bring about.[5] In any case, aesthetic experiences are object-centred and happen in our encounters not just with artworks and nature but with all types of things. The same sort of independent value can be found in different contexts of appreciation, reaching the field of the everyday and design objects.

## 2. Properties of the Form

Aesthetic properties are properties that we perceive or experience in the appearance of objects, which have been commonly understood as their *form*. But, again, there are various ways of conceiving what the form consists of.

Kantian formalists understood the form of objects as something immediately available to the senses. Colours, lines, rhythms are typical examples of non-aesthetic properties immediately given to sensory perception that produce the experience of unity, harmony, balance and structural properties in general; in these approaches, aesthetic properties are perceived without reliance on any background knowledge. Furthermore, as the form was understood as immediately available to the senses, the formalist doctrine separated form from representational content, yet formalists grounded

the value of art in something special about its forms. One of classic formalism's main figures, Clive Bell sustained that "the significant form" gives rise to the distinctive "aesthetic emotion" (*Art*, 3). However, to confine the aesthetic experience to the appreciation of form in such terms is, for many, an obscured and narrow description of the aesthetic that significantly reduces the reasons why we value art and, on the other hand, hampers the candidature to appreciation of aesthetic value of non-artistic ordinary daily-life objects such as designs for what they are.

As said earlier, the traditional formalist view is contested by acknowledging that "formal proper-ties" are not "those aesthetic properties exclusively determined by sensuous or physical properties",[6] given that the appearance of objects of the imagination and of the intellect can also have form. But, whereas a moderate formalism admits that, it will not accept the aesthetic relevance of the context and the knowledge of the observer.[7] Others have defend though that such factors affect importantly the capability to pay attention and affectively respond to certain aspects of the objects, being capable of altering the experience of those properties. In this sense, non-formalist accounts note that aesthetic experience is mediately informed and hencehow, imbued with thought, imagination and emotion, aesthetic experience will reveal expressive and representational qualities.

Arguably, the separation between form and content held by formalism does not work in the appreciation of objects such as artworks. The formalist requirement for non-referentiality that is supposed to exclude from the form features referring to anything "external" to the objects has for long been questioned. Using exemplification and most notably expression, Nelson Goodman showed how world meanings do not locate out the artwork's and therefore can be attributed to "pure" abstract paintings or works of architecture (*Ways of Worldmaking,* 59–65).[8] Moreover, many have insisted on the fact that, when dealing with artworks with clearly representational content, *what* they say is not independent of *how* they do it. Clearly, works such as novels or films represent characters, actions, points of view in a certain way, conveyed or embodied in a certain form and are grasped through such form. In short, form does not exclude meanings yet what matters aesthetically speaking is whether we derive satisfaction from attending to how the content of a work is conveyed or embodied in the work in question for its own sake. However, this does not preclude that through our aesthetically engaging with the work other instrumental values are also achieved.

Noël Carroll defines the form of artworks as the "ensemble of choices intended to realize the point or purpose of the artwork" (*The Philosophy of Art*, 143) that, within a historical and pluralistic approach to art, goes often beyond aesthetic gratification. Carroll's broader view of form can apply to other sorts of artifacts like design objects. Both artworks and design have functions and forms, but unlike art, design would have no content. Herein, Jane Forsey defends the muteness and immanence of design objects.[9] She clarifies that "this is not to suggest that designs cannot also be used in commu-nicative practices: many designs become symbols of wealth, power, elegance, and so on", conse-quently, "many of our consumer choices involve attempts at self-expression or self-definition through the objects that we purchase and use". However, design objects "do not themselves speak, or were not created as forms of (profound) communication" (67, n. 90). In short, in contrast to artworks, designs are "'mere real things', to use Arthur Danto's phrase" (28). Another leading theorist of design, Glen Parsons, also analyses these "meanings" of design as expression of the spirit of a certain time and recalls that even the slogan of Modernism "beauty follows form" did not involve the elimination of the expressive and symbolic dimension as "design products can still 'say' something or express an idea or content via their functional elements" (61). Instead, Parsons argues, what Modernists rejected was ornamentations as superimposed layers of symbolism and expression that obscure the essential func-tionality of designs in line with what they thought was the spirit of our age.

By underlying the contrast between the artists, who try to communicate an original vision, and the designers, who are not expected to say anything profound and are often anonymous, Forsey and Parsons are signaling the everydayness and utility of design. They leave aside the practices that bring art and design very close and so increase the relevance of the expression of the designers' own style

for the aesthetic appraisal of their forms, rather than borrowing style from the realm of fine art. Here is proof of the diversity of objects in the field that we call "design" although, given that Forsey and Parsons intend to stress what is specific of this context of aesthetic appreciation, they deal with design as belonging mainly to the quotidian life.[10] In any case, inasmuch as ornament has to do with the appearances of objects independent from their functions, it could point though to the ground of aesthetic value of design.

Having the same functions, objects show nevertheless a great variety of forms. Such diversity satisfies every taste not just to feed the markets but as a praiseworthy signal of creativity. Functionality may still be manifest in the appearance of designs that we still recognize as sofas or coffee-pots and constrains the options taken by designers from considerations of structure, size, economy, safety or the appropriateness of the materials for the use in question. But such limitations may nevertheless seem small in comparison with the wide scope of formal possibilities open to designers and support the belief in that "function always *underdetermines* its form" (Parsons *The philosophy of design*, 104) where anyway aesthetic value would rest.

Stecker has argued that the aesthetic experience of everyday artifacts is based in formal properties that do not need either to manifest their functions nor enhance the artifacts' performance of their functions. By emphasizing that artifacts will have variable features (forms, sizes, colours), Stecker contends that they are responsible for the variability too of any artifacts' aesthetic value. Their different looks give them different aesthetic characters (including their different expressive and symbolic dimensions) in contrast to perfectly functional design objects yet with no aesthetic appeal at all. On the other hand, Stecker does not mean to ignore the objects' functions, as they are undoubtedly part of the relevant background knowledge that affords their correct aesthetic appreciation, but his point is that the recognition of their functions does not translate into properties aesthetically valuable and only plays a role in aesthetically appreciating artifacts "through an interplay of function and [independent] formally valuable aesthetic features of the artifacts in question" (*Intersections*, 153). Such interplay highlights though the possibility that aesthetic features of the form actually help to enhance the artifacts' performance of their function, which is at the core of what Stephen Davies call "functional beauty".

Davies attributes "primary" functions to utilitarian artifacts. By primary functions, he means those that are central to the kind of artifact as such. Davies declares functionally beautiful the object "possessing aesthetic properties that contribute positively to its performing its intended principal function" (237). But Stecker states that this is a case of interaction between two values, aesthetic and functional, that remain different in sort. Indeed, Davies' notion of "functional beauty" names "the logic of aesthetic judgements as they relate to human artefacts, [...], in which non-aesthetic […] and aesthetic goals *interact and combine*" (237, my emphasis).

Stecker gives the example of plates shaped in a way that makes them better for arranging and consuming food. The interaction between aesthetic properties, which he refers to as design properties, and functional value could of course be negative, when the former hampers the latter. However, in other cases, no interaction occurs since formal design on an artifact is purely ornamental, fulfilling purely "secondary" functions; and so, the plates might have a visual pattern painted that pleases aesthetically without affecting their function at all (147). Hence, Stecker's analysis limits the possibility of intersection between aesthetic and functional values to the constrain of the formal features of design objects in virtue of their belonging to an artifact kind and the possible enhancement of their functional utility carried out by aesthetic properties. He adds though one more at the end, which occurs "when a secondary [aesthetic] function naturally emerges from the primary one…; *an experience in which the artifact plays a central role when performing its primary function*" (148-149). Like when the plates on which food is served (primary function) enhance the overall experience of eating a meal which gives them "*functional aesthetic* value […] that is closely enough related to, though not identical with, the primary function of the plates" (148, my emphasis). Thereby, this is

the closest that Stecker gets in combining functional and aesthetic value, "as they are wrapped together in expectations, even norms perhaps, about the role dinnerware should play", yet keeping the distinction between them. Finally, Stecker underlines that, since the aesthetic aspect of artifacts is an important part of our interaction with them, the way artifacts are made, used and appreciated contribute also to the understanding and evaluation of a way of life, or social or cultural practices in which those artifacts play a role. But this has nothing to do either with objects' functionality nor with their aesthetic value per se but with a larger appreciative enterprise that comprises both them and other kinds of values. I agree, that is a different issue, yet I want to point out that one of the possible interactions described by Stecker (namely, when aesthetic features of the form enhance the artifacts' performance of their function) matches Davies' notion of functional beauty. However, both Stecker and Davies keep function and aesthetic value separated, for both things interact and combine but do not blend. My view though is not to exclude such possibility of appreciating aesthetic-functional properties, as other accounts of functional beauty defend. These functional aesthetic properties though would still be properties emerging from the contemplation of the appearance of the object, not from the subject's interaction with it.

### 3. Functional Beauty

Davies and Stecker attempt to reconcile functionality with the idea of the aesthetic value of an object as based on its appearance. They draw some ways in which aesthetic and functional value may intersect and even interact in utilitarian artifacts but neither of the notions of functional beauty and functional aesthetic value given integrate these two elements. Other theories have gone further in the ambition to blend function and form seeking to show a kind of beauty (meaning aesthetic qualities) that is functional in the sense that objects' purposes locate on the basis for certain kinds of aesthetic judgements, and that, taking functionality as a defining feature of design, is essential to guide its correct aesthetic appreciation. This suggests that there will be no functional beauty properly speaking unless considerations of function actually integrate the aesthetic character of the objects. Yet proposals divide according to the different explanations of the ways in which function is at the base of aesthetic judgement offered.

Some philosophers appeal to the canonical Kant's aesthetics and his notion of "dependent" or "adherent" beauty. Different from free beauty that presupposes no concept of the objects, adherent or dependent beauty does presuppose concepts of what each object ought to be and it is measured in accordance to its perfection therewith.[11] Whereas paradigms of free beauty are to be found in natural objects such as flowers, which bear no content and to which we respond to their forms alone, the beauty of other objects, typically artifacts, depends upon attending to them in terms of particular determinate concepts. That is, artifacts cannot be aesthetically appreciated in a correct manner ignoring the kind of thing they are and the purposes they aim at. Hence, the aesthetic appreciation of design objects that serve certain utilitarian goals, requires attending to their functionality. Now, in Kant, even when aesthetic appreciation demands seeing the objects as what they are and what they are for, their concepts and content do not determine their beauty, which will mean confusing aesthetic pleasures with sensual and practical ones. In a nutshell, whereas Kant admitted dependent beauties, the requirement of disinterestedness makes it inconsistent to defend that functionality is involved at all in what makes the object beautiful .[12] And yet, Kant's interpreters have discussed whether such dependency of certain beauties still leaves room for the influence of functionality in aesthetic pleasure.

Some have described the role of the knowledge of the function in the appreciation of their dependent beauty negatively, namely, as constraining what we can find beautiful in an object, like excluding certain forms incompatible with the objects' function.[13] This view matches one of the possibilities of intersection between functional and aesthetic value analyzed by Stecker, leaving the experience of beauty *free* of functionality and relying exclusively on the appeal of the aesthetic

properties of the form, chosen by the designers.[14] But in order to support the idea that the functions of the objects have a role in their being beautiful, a different interpretation has been given of dependent beauty emphasizing that we appraise the objects because of the perfection *in the way* they fulfill their purposes. First Robert Wicks and later, following his arguments, Jane Forsey argue that it is precisely because the notion of dependent beauty affords the contingency in design forms in relation to its purposes, that we appreciate the beauty of certain concrete designs, especially when we compare them with other possibilities. The contingency of an object's particular form shows how its function relates to *that* particular form, which leads to the experience of beauty. However, Glenn Parsons objects that this is just another way to subscribe the underdetermination of form by function (115). Indeed, I think that the emphasis on the contingency of a particular form as the source of aesthetic pleasure could lead to Stecker's view, who insists on signalling the *different* look of concrete beautiful things in respect to others of the same kind as the explanation of their distinctive aesthetic character, not the function they all share. In order to make functional considerations integrate the aesthetic character of the objects by delivering some distinctive properties, a closer (more necessary so to speak) connection between certain form and the object's functionality should be offered

Recurring also to Kant's notion of dependent beauty, Jerrold Levinson explains that the appreciation of the beauty of artifacts whose identity is of a purposive or functional sort depends on seeing them as objects of a certain kind, because our perception does not construe objects as abstract sensory presentations and, then, seeing them "*as for* something" makes the objects display "properties that would otherwise lack" ("Beauty Is Not One", 194). How consistent the contribution of objects' practical dimension to their form is with Kant's own view may again be quite controversial. The idea is, however, developed by other accounts of functional beauty that do not appeal to Kant's notion of adherent beauty. The most relevant account of functional beauty in this vein is proposed by Glenn Parsons and Allen Carlson (2008).

Indeed, Parsons and Carlson claim that our recognition of the aesthetic properties of an object is influenced by our knowledge of its function that somehow alters the appearance of the objects. Applying Kendall Walton's theory of the structure of proper aesthetic judgements of works of art to the case of functional objects, Parsons and Carlson defend that, viewed under their "functional categories", objects have perceptual properties that are standard for the type, contra-standard, or variable. And these properties tend to display aesthetic qualities such us elegance and simplicity (when the object has mostly standard features), "looking fit" (when not having contra-standard features the object has though variable ones that make things *appear* especially *apt* for carrying out its function), and "visual tension" (salient when the object has contra-standard features that would make it appear unsuited to perform its function yet pleasing when the object is however manifestly functional). Grounded in a perception of the connection between non-aesthetic elements and their function that pleasures, these properties exhibit this essential dimension of design. But it is important to note that Parsons and Carlson claim that these are aesthetic properties; perceived in response to non-aesthetic features that are indicative of the objects' functionality yet refer to how the objects *look* or *appear to* us, pleasing by their own sake independently of whether the objects are, or not, actually efficient. So described, functional aesthetic properties are grasped in the contemplation of the object, not in the interaction with them.

However, as already noted, some authors, like Stecker, are sceptical about the possibility of the translation of the perception of functionality into properties aesthetically valuable. He particularly contests the idea of turning "looking fit" into an aesthetic category since it is not a sufficient condition to arouse aesthetic pleasure. As said, objects perceived as fully functional can have no aesthetic appeal, proving that formal properties, especially the variable ones that stand out over standard features, would be responsible of their aesthetic value, their elegance or simplicity, for instance (*Intersections* 145). It is true that Stecker concedes that, in the case of pleasing visual tension, contra-standard features that usually undermine aesthetic appreciation sometimes can enhance it, but de-

pending on their combination with certain positive formal properties, such as colours or unexpected shapes "that please the eye and engage the mind in forcing us to wonder whether they serve some purpose or are just decorative" (150). He is ready to extend this to the case of looking fit. Nevertheless, Stecker still denies that our recognition of functionality penetrates aesthetic experience, which is precisely the claim made by Parsons and Carlson. Hence, the debate is open among those that, like Stecker, remain skeptical about the possibility of translation of functionality into aesthetic properties and those who affirm that seeing objects under certain functional categories to which they belong sometimes can affect aesthetic perception in the understanding of how their actual form is well-suited for their functions and given the competence and expectations of observers (Paris 2020, Sauchelli 2013). Big tires in a pickup truck make it appear pleasingly powerful, whereas it may look wrong in other kinds of vehicle (Parsons 119).

I agree with Stecker that aptness for a function must be embodied in a valuable form since I think that in aesthetic appreciation, of design as of any other sort of object, appearance is always the point. Without relation to the form, functionality is not enough to cause aesthetic pleasure. But I am inclined to think that appearance of functionality can take part in building the form of objects that appeal to us, as they appear to our senses, imagination and thought. As is also argued in the case of art, appreciating the objects under certain categories can carry out a "transfiguration" of their aesthetics (McFee, 7).

Experiential accounts of aesthetic experience count on some relevant background knowledge and beliefs that can penetrate and affect our perception of objects. Informed by a wide range of elements, a complex set of aesthetic properties *can* emerge from non-aesthetic ones (as the former are always undetermined by the latter) in aesthetic experience of design: functional, structural as well as expressive and representational properties, which may serve possible purposes other than functionality of design, trying to engage the mind beyond decoration too. To dissect the exact source of aesthetic pleasure in each case might be difficult, since aesthetic appreciation of forms, rather than an addition of (isolated) classes of aesthetic properties, looks more like a continuum of intersections and interactions between them. In any case, according to a rich and pluralistic view of aesthetic appreciation, the evaluation will vary according to the contingent designs in question.

On the other hand, functions or purposes may be also plural within a type of artifact (belonging to different functional categories) and also within the members of the same type (as the purposes of individual designs may differ from the type's). Different to artworks, whose functions must be discovered typically by interpreting the works' meanings (Stecker, *Intersections*, 52), design objects have defining functions that some considered their "primary", as Davies puts it, or "proper" functions, in Parsons & Carlson's terms, central to the type. To address the proper functions of objects seems an important matter since it provides the concepts under which their beauty is judged, insofar as cases of adherent beauty as Forsey sees them. The indetermination at this level could lead to an objectionable relativism about the correctness of judgement of functional beauty, especially in the case of conflict (Parsons & Carlson).

However, theories of design have offered different proposals for the identification of such defining functions. Probably the more prominent in recent discussions are, on the one hand, theories that appeal to the designer's intentions, as Forsey does in her book, and, on the other, the "selected-effects" theory offered by Parsons & Carlson, which derive proper functions from the object's actual use and the success of ancestors (that is, earlier instances of a kind) in meeting some need or want . The intense debate between the two has provided multiple examples in support of both theories and counterexamples against them. As Stecker states, the former seems to better explain why objects are created in the first place and accommodate novelty in design whereas the latter may offer good reasons for both why certain artifacts keep being manufactured and distributed, and the changes in functions publicly accepted that happen over time; whereby the suggestion of some sort of combination of the two theories is maybe advisable (*Intersections* 142). New functional properties could

emerge with new usages, although such new usages would probably not have been adopted unless objects' original forms seemed apt for them. Sometimes the original function could be completely forgotten, for example, Madrid's Plaza Mayor planned though as a royal courtyard. However, the "full appreciation" of objects that are no longer used as first intended, like the also much-discussed case of an old church that becomes a pub, would require attention to that as much as to their current functions (*Intersections* 144). Recalling Carroll's definition, the original forms were intended in conjunction with a purpose in mind. Hence, for their appreciation, it seems to me unavoidable to endorse some sort of intentionalism, compatible with the anonymity of much design, that makes hypothesis in reference to the aesthetic choices taken in a certain time and within certain context and social practices, which are public. After all, as Stecker also points out, it is easier, in general, to assign defining functions *to* an *artifact kind*, for example, dresses, than to *individual* designs, let's say, a dress designed for the coronation of a queen. Individual designs may carry out multiple purposes, some other than the proper ones of the kind, whose particular instantiation nonetheless depends on certain intentions with which they were made or used (141). Finally, given their contingency and singularity, the appreciation of the aesthetic value of individual designs requires to counterbalance the whole range of each object's aesthetic properties, where the potential weight of functional beauty, related to the proper function of their kind *or* their own purposes, is relative to the weight of *other* aesthetic properties of their form.

## 4. Performative properties

Accounts of functional beauty (as well as other possible aesthetic properties as included in the term) try to ground a legitimate source of aesthetic pleasure of utilitarian objects such as design. Furthermore, if design is essentially utilitarian, functional beauty could be thought as a normative standpoint for the correct aesthetic appreciation of design, whereas other properties of the form could play a secondary role at most. After all, as Parsons argues, functional beauty is to capture at least partly the Modernist claim affirming that in good design beauty follows form. Accepting that, in so far as it affects aesthetic perception, functionality will be adding aesthetic properties that otherwise we will miss, my arguments, and I believe that Parsons' as well (120), clearly deny giving such privilege to functional properties. Instead, my proposal is to consider the weight of the different aesthetic properties, whether emerging from functional considerations or not, relative to the design in question.

Still, another source of aesthetic pleasure might be summed up: the user's active interaction with the object. Particularly promoted by everyday aesthetics, there is a growing interest in the aesthetic value of our own activities, including actions, reactions, and body movements as well as our deliberations and choices. What is offered by this performative framework is an agency-focused standpoint for aesthetic appreciation. This standpoint is coherent with tracing aesthetic salience beyond the "sensuous qualities" of objects (as defended in section 1) and seems worth exploring for the aesthetics of designs since they are meant to be used or enhance active interaction with them. Properties salient in the appreciation of such interaction or usages are aesthetic since they emerge in more or less satisfactory first-personal experiences of mental and physical processes involved in our activities and valuable for their own sake. For example, let us consider an elliptical machine. A particular graceful form of motion is appreciated, not in the machine's appearance, but only when it is used. Grasped in the actual interaction with design objects, performative aesthetic properties can be considered notwithstanding as another sort of aesthetic "functional" properties (Favara-Kurkowski & Andrzejewski 77). But, if we attribute aesthetic properties to the activities and not to the object, we may question such experience in so far as it refers just to idiosyncratic mental states, failing to observe the requirement of intersubjective validity for aesthetic judgments, and results hardly informative for the aesthetic evaluation of design *objects*. However, such worry should disappear when realizing that, as in the case of the elliptical machine, the object is designed to afford certain (performative) aesthetic experience.

The lack of intersubjective validity of aesthetic value does not seem to be a worry anyway for philosophers that, working in everyday aesthetics actually emphasize the privacy and variety of people's own responses to artifacts in their current life since, by contrast with the discussion of value in art, they do not have to match any frame dictated by convention or social practices. In spontaneous everyday life our aesthetic attention can constitute the aesthetic object in any way we wish (Saito 18–19). Indeed, the "object" towards which we aesthetically respond to are our own activities, being ourselves the only "experts" on how merited such responses are. The importance of aesthetic discourse and criticism is emblematic of the sphere of art which everyday aesthetics wish to diverge from. This is not to deny that our experiences cannot be intersubjectively sharable but, after all, "appreciating design is not a question of recognizing what everyone likes but what makes us feel good" (Favara-Kurkowski & Andrzejewski 80).

Others theories like Stecker's, but also functional beauty accounts such as Forsey's and Parsons & Carlson's, are against such a considerable break with aesthetic tradition, fearing that aesthetic value confuses too with mere sensual pleasures and moral value as well. I share their concerns. Yet, performative approaches do not have to give up the possibility of adding aesthetic properties to the intersubjective discussion of the aesthetic value of design objects. Focused on the kind of "arts" (in a very broad use of the term) intended to engender agency and activity in their audience, C. Thi Nguyen has developed a "process aesthetics" that helps to include performative qualities among those the forms of design objects dispose to cause in suitable qualified observers, in a derivative way.

Nguyen agrees that when artifacts are in use, our attitude towards them is not contemplative, whereby the target of aesthetic appreciation moves from the object as it exists independently of our activity to the activity itself, to which we attribute aesthetic properties. Nevertheless, he also argues that the aesthetic experience of activities can be shaped as part of intentional practices such as design. Following his ideas, here process aesthetics comes from the perspective of the users, and of course, we each have our own different activities, but they are not so unframed as everyday aesthetics implies. In fact, Nguyen says that, quite like the traditional arts, artifacts can shape aesthetic activity (4). Recalling the example of the elliptical machine, our aesthetic attention is directed towards certain aspects of our action. Somehow, designs sculpt particular activities. In design, artifacts help to stabilize certain experiences of action and make them more intersubjectively sharable because their usages develop under what he calls "functional frames" that guide the users under the specification of some goal and "practice-based frames" (conventions, social practices, rules….) (18). Likewise, the structure of the artifacts and the aesthetic choices made in designing them encourage and call forth certain aesthetic experiences of doing. Nguyen's view does not require that the purpose of an artifact aligns with the designer's intent but he notes that, in some cases, "it is the coordination of the prescriptions and the artifact design that can give the artist [designer] some measure of control over the audience's experience, and provide for some stability to how the audience interacts with the artifact and to the experiences which it generates" (18).

Again, as with the concepts or background knowledge that inform aesthetic experience, the framing does not determine it, nor does it deny the autonomy of the aesthetic. Actually, despite the relatively stable focus of attention provided by designs' functional frames, the aesthetic response of the users is expected to be rather diverse; focused on agency, "the precise content of the experience, and the precise form of its attendant aesthetic properties, varies" from one user to the next, even when they are engaging with the very same work" or design (21). Besides, such aesthetic qualities are neither demanded to be externalized nor made public. But performative aesthetic experiences are not completely independent from the forms of the objects that evoke them. Nguyen mentions urban planning as process art. We can use that example to note how designs generate performative aesthetic properties in the (private) self-reflective appreciation of the activity by the people that, for example, walk through cities. As Nguyen explains, some of their delights, or uneasiness, will arise from object-aesthetic qualities, such as the visual quality of the architecture and the street and the

layout of the city, that will also condition the aesthetic quality of the choices they will make to navigate them (6). Performative aesthetic properties are qualities of the activities, not the objects, but nevertheless we may also "make secondary judgments about the quality" of the object "based on its functional capacity to encourage aesthetically valuable actions" (10).

Summing up, performative aesthetic qualities emerge in the user's activity itself. Still, we can think of some of them as the merited response to the correct apprehension of particular features in the objects as they exist independently. Moreover, inasmuch as design objects are instrumental, we may believe that the set of their aesthetic qualities would not be complete until the users have played their own active role. And, of course, this view doesn't mean dismissing the value that our personal and private engagement with the objects have for us, yet it adds performative properties that "can participate substantially in the aesthetic end product and its particular value — without finalizing that value" (25).

## 5. Final remarks

To conclude, by discussing formal, functional and performative accounts of aesthetic properties, my essay has tried to assess their main respective contributions to the evaluation of design objects. I have defended that the global aesthetic value of these objects is the result of the intersections and interactions between these different sets of properties. Formal properties, structural, expressive and symbolic are responsible for aesthetic value of design objects, often independently of their functionality and many other times enhancing it. But the suitability of objects' features for their functions, inasmuch as constituent of how the objects appear to us, can be a source of aesthetic pleasure, as well as the forms of the objects can dispose the emergence of aesthetic properties in the very same activities that we perform while using or interacting with them. And every case will be different. Conditioned by the forms of the artifacts and their rules for usage, performative and object aesthetics will often be deeply intermingled, increasing the richness and complexity of aesthetic appreciation in the pluralistic and variable way I defend here for design objects.

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## Notes

[1] See Sibley's seminal work: "Aesthetic Concepts".
[2] Alan Goldman ("The Experiential Account of Aesthetic Value") claims that aesthetic appreciation engages simultaneously our perception, imagination, thought, and feeling; such an engagement of our mental faculties with the form of the object will be the unique mark of aesthetic experience.
[3] After Kant the so-called "cult to aesthetic appreciation" turned the notion of disinterestedness into an intellectually rigorous attitude, radically distinct in kind from ordinary perception; a strong requirement for aesthetic appreciation deemed by many as actually impossible to achieve, even a myth (see Dickie, "The Myth of the Aesthetic Attitude").

[4] Stecker's definitionis inspired by Jerrold Levison's *The pleasures of aesthetics,* 6.

[5] See *Intersections,* 23. Stecker subscribes "aesthetic empiricism" which holds that aesthetic value is the value of a type of experience. Other authors sustain instead that the primary bearer of aesthetic value are aesthetic properties. Although, as Stecker shows, both accounts would be equivalent once we realize that "the important fact for us is that response-dependent accounts of these properties define them in terms of experiences they are disposed to bring about" (37).

[6] As Nick Zangwill puts it, that view would be "the most straightforward account …. [that] would capture the intuitive idea that formal properties are those aesthetic properties that are directly perceivable or that are determined by properties that are directly perceivable" (Zangwill, 56). His "moderate formalism" does not agree with such account.

[7] In particular, Zangwill discusses Kendall Walton's objections to formalism (Zangwill, chapter 5).

[8] His account remains very influential in other more recent philosophical views that reject classic formalism. For instance, see Young's *Critique of Pure Music*.

[9] Forsey defends that craft is also mute and, in this way both, design and craft, are distinct from art. Yet, as opposed to craft, design is mass-produced and not the result of the skilled production of an artisan that directly manipulates raw materials. Thus, design emerges with industrial revolution, the possibilities of mass manufacturing and the growth of market capitalism.

[10] Favara-Kurkowski ("In defense of Forsey's Aesthetics of Design", 3-4) makes this point in relation to Forsey.

[11] The locus of the distinction is *Critique of the Power of Judgement* §16.

[12] Representational artworks are artifacts that serve purposes (think of religious painting, for instance), whose beauty is so dependent on what they are and represent. The beauty of artworks will emerge from the way artistic genius *freely* represents content in a particular form. As a matter of fact, by marking out the distinction of art's aesthetic appreciation, Kant separated high from low culture and distinguished art proper from merely functional artifacts, which do not usually promote aesthetic features above all but aim to please and are evaluated in terms of their commercial and practical goals. See Kieran (*Revealing Art,* 63).

[13] Paul Guyer, "Beauty and Utility in Eighteen-Century Aesthetics". Although in "Free and Adherent Beauty: a modest proposal" Guyer gives a more positive view of dependent beauty.

[14] See also Davies (235-6).

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# Design and Beauty: Functional Style

JANE FORSEY

**Abstract:** This paper seeks to characterize the particular ways in which design beauty arises and is assessed, distinguishing design appreciation on a number of grounds, including the 'functional style' of design, which integrates form and function in ways unique to designed objects. Making four central distinctions—between notions of design *vs* art; aesthetic *vs* instrumental judgements; function *vs* use; and ornamentation *vs* mere decoration—the paper suggests that aesthetic judgements of design require recognition and assessment of the play of form and function in the design decisions that achieve the creation of an object within acknowledged functional constraints.

*Keywords:* function, style, ornamentation, decoration, aesthetic judgement

Beauty is the original focus of philosophical aesthetics, and has a complicated history, as being connected from as far back as Plato with both truth and moral goodness. Even shorn of these connections, as in most of 20th century philosophy, beauty retains a positive meaning: if an object is beautiful, it is worthy of attention, contemplation, appreciation and preservation. The experience of beauty is said to be intrinsically pleasurable somehow, even if no longer considered to be morally or cognitively uplifting. And much of the history of aesthetics has been an attempt to produce what I call a unified theory of beauty—defining what it is, on the one hand, and how we come to perceive or experience it on the other. Immanuel Kant's theory is perhaps the most comprehensive and influential, but there have been many others.[1] William Hogarth, for instance, identified beauty as line and form that can be directly seen; and Clive Bell claimed that beauty, as significant form, was instead experienced through a particular aesthetic emotion, that he likened to a kind of exaltation that transcended regular human perceptions.[2]

What unified theories of beauty have in common is that they claim beauty is the same, wherever it appears, and objects that are beautiful are all beautiful in the same way, or for the same reasons, or as a result of the same singular experience, or due to the same judgement. So, a sunset, a landscape, a human figure, a work of art, a designed object—if beautiful—will share the same property, and be equally worthy of the same attention and appreciation. Even if we broaden the notion of beauty to that of 'aesthetic value' more generally, as has been the practice in most contemporary aesthetics, we find the same search for the same unified theory: aesthetic value has been defined as intrinsic, homogeneous, sui generis, or of its own particular kind, and, again, as being therefore the same across all possible objects and experiences. As Robert Stecker has recently argued, aesthetic value is "everywhere. [It] can be realized in different ways in different media but it cannot be a different value in different media".[3] And so beauty is a singular value that is the same in all objects in the world.

I won't debate the merits of a unified theory of beauty in this paper, but I do want to point out that relying on such a theory does little to help us understand the specific role of aesthetics in evaluating and appreciating design in particular. And, as philosophy spends a lot of its time making ever finer distinctions, I will make a few of my own here, and see if they can help us in understanding how the aesthetic is implicated in, and important for, our evaluations of designed objects. I am writing here

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from the point of view of a user, consumer and spectator of designed things, rather than a creator, manufacturer or marketer of them—essentially, from the point of view of an aesthetic subject, who has aesthetic experiences of design. And I think that we *do* have aesthetic experiences of design beauty, and that these experiences are importantly different from our experiences of nature and art. It is what these amount to that is the focus of my consideration.

In one sense, the unified theory is not wrong: I can go to a museum, such as the Louvre, or the Museum of Modern Art in New York, or the Design Museum in Copenhagen, and look through protective glass at delicate porcelain, at silver snuff boxes, at 18th century inlaid desks, at tapestries and chairs, and admire their grace, elegance and symmetry, or their arrangement of shapes, forms and colours, and find them beautiful or aesthetically pleasing. The unified theory of beauty places its emphasis on how things look and the pleasure we take in them for that reason. And sometimes we respond to designed objects in just this way. Kant would call this 'free beauty' or the purely beautiful (Ak. 5:229), and it can apply to anything.

But I want to suggest that this approach treats designs as *objets d'art*, or what in English we also call 'conversation pieces', or 'decorative art', where a vase or a table is not used, but displayed, with the intention of being merely appreciated for its look and formal qualities alone. This leads to my first distinction: we are not in this regard treating these things expressly *as* works of design, but we are aestheticizing them, in effect moving them from one category of object to another. Now, categories can be fluid, and mutable: what was once a designed object meant to be used can become a museum piece of decorative art, or even gain the status of artwork proper, such as African tribal masks, Native Canadian beadwork, or early Christian altarpieces. There are no hard and fast ontological differences here. Similarly—distinction number two—we can also make a number of different kinds of judgements or assessments about the very same object: for instance, I can judge a painting for its financial or investment value, or prudentially as to whether hanging it *over there* will cover a hole in my wall; I can judge a shoe ethically as to the labour practices involved in its manufacture, or instrumentally as to its comfort, or *purely* aesthetically as to its elegance in shape, colour and form. Kinds or types of judgements are equally fluid and mutable. What I am interested in investigating is the kind of aesthetic judgements we make of objects of design when they are taken *as* design, rather than *as* art or *as* conversation piece, or *as* marketing tool, and when those judgements are not instrumental or economic or moral, but when they are directly and aesthetically evaluating and appreciating design *as* design.

Now, regarding my first distinction, when we want to focus on the ontological category of designed objects *per se*, we can observe relatively uncontroversially that while designs have formal properties of shape, colour and so on, they are also purposive things: designs are functional objects, and I want to argue that their functions are relevant to our appreciation of them. Because, regarding my second distinction, when we make an aesthetic judgement about a thing, this judgement cannot ignore the object's ontological status (however loosely we define it to be). We evaluate works of art in a particular way when we know they are artworks (for instance, we interpret them for their meaning). While judgements of free or pure beauty are always possible, even Kant accepted that they occur mostly in nature, as when we appreciate a flower or a seashell for its form alone. The rest of the time, our aesthetic experiences are more complex, and are conditioned by our knowledge of the kind of thing we are presented with.

So, for simplicity's sake, we can say that designed objects have (at least) two important elements for the consumer or user: form and function, and our task becomes one of understanding how these elements come together in a 'properly' aesthetic appraisal of a given work of design. If we emphasize form over function, we are led in the direction of someone like David Pye's theory of design, who writes that "whenever humans design and make a useful thing, they invariably expend a good deal of unnecessary and easily avoidable work on it which contributes nothing to its usefulness". For Pye, design is all about decoration, or embellishment, which he sums up as "primarily doing useless work

on useful things".[4] This, as I have noted, amounts to the aestheticization of design, where our appraisals of an object's beauty are restricted to its formal elements alone. And if this were indeed the case, we could merely rely on a unified theory of aesthetic value, and have no need to talk about the particular nature of an aesthetics of design at all. Design appreciation would be the same as the appreciation of art and nature, which I contend it is not.

The alternative, that we emphasize a work's functional properties instead, brings us up against the opposite extreme, in the likes of Adolf Loos, who saw ornament as a crime in design, or a symptom of vulgarity. Dieter Rams, one-time president of the German Design Council and chief designer at Braun, claimed that "people do not buy a specific product just to look at it, rather because it performs certain functions...The festival of colours and form and the entertainment of form sensations enlarges the world's chaos...[Design] must conform in the best possible way to the expectations that result from the function the product fulfills".[5] While both positions may accurately reflect moments in design history, I do not think that either of them are complete. We do not present design awards to things based solely on how they look, regardless of whether they work, but nor do we celebrate the purely functional while ignoring its form. If we did, museums would be filled with hammers, paper bags and toothpicks. Instead, I will sketch a proposal for a more integrated approach, where form and function are taken together in our aesthetic appreciation of design; Kant called this 'dependent beauty', but I prefer something like 'functional style'.

To lay out this sketch, I need to first say something about function, and here is my third distinction: the function of an object refers to what it was intended or meant to be, and must not be confused with the use to which it may later be put. A snow shovel may well be used to prop open a door, but that is not what the shovel was designed for—it was intended to remove snow. Even if the shovel works very well to keep my door open, I do not then call it a doorstop, but I acknowledge that it remains a shovel: I place it in a certain ontological category as being a particular kind of thing, even if my own subsequent use of it is somewhat idiosyncratic. When we appraise a design—in a competition, for instance, or as a potential buyer—we need to understand the object in terms of this 'originating' function—what it was designed to be, whether by creator alone, or creator in conjunction with commissioning client, or by corporate directive—rather than how it might later come to be used. We slot designs into different categories in competitions, and these categories rely on some ontological definition that is grounded in originating function that stays with the object, rather than in a history or pattern of use, or indeed in the forces operating in the marketplace.[6] This is an avowedly intentionalist approach to design ontology, and draws a distinction between function and use, which I think can be too easily elided.[7] The categorization of an object—what it *is*—is grounded in, and determined by, some originating function that gives it a stable identity. Uses to which an object may be put, no matter by how many or how frequently, do not have the ability to alter its ontological status as being a thing of a certain kind. In the 1980s in Canada, for instance, milk crates were ubiquitous in student apartments and rooms: these square open-topped sturdy and stackable plastic boxes made for transporting cartons of milk to stores from dairies were the perfect size and shape for bookcases, bedside stands and coffee tables. Even so, they did not *become* bookcases, even when used as them, by however many people, as though by some kind of informal consensus. They remained identifiably milk crates, imaginatively and economically recycled (or more often stolen).

So my third distinction contains the first two: we need to know what ontological category in which to place the object, i.e. as a work of design, in order to be able to make a specifically aesthetic judgement about it, as opposed to some other kind. Aesthetic assessment is grounded in the identification of the object, if we seek to appraise it *qua* design. For a unified theory, or a judgement of 'pure' beauty, what the object is does not matter: as Kant has noted, in these judgements, "one does not want to know whether there is anything that could be at stake, for us or for someone else, in the existence of the thing, but rather how we judge it in mere contemplation (intuition or reflection):" that is, on the basis of the mere appearance of a representation to the mind when we are "indifferent"

with regard to the "real existence of the object of this representation." (Ak. 5:204–5). An instrumental assessment, such as a painting being useful to cover a hole in my wall, equally does not have this strong requirement of knowing the object's originating function: it doesn't matter in this case that it is a painting, just that it is the right size and shape to perform the use I seek to make of it—a carpet, a photograph, a mirror would be interchangeably useful in this regard. Similarly, economic judgements may well depend more on market forces than object categorization; but to make an aesthetic appraisal of a design, it must be understood to *be* a designed object, first, and second to be a particular object that can be identified as such in order for evaluation to get off the ground.

This third distinction includes a couple of further important notions. First, knowledge of a design's function must be *direct* rather than theoretical. Reading about the physics of balance and load, the manufacture of metals and plastics, cold and heat resistance, and so on, will not help me assess a particular snow shovel unless (i) I am directly acquainted with snow and its removal, and (ii) I actually hold, touch and work with the shovel in my hands. The consequences of this direct knowledge are, further, that properly aesthetic evaluations of a design will be historically and culturally specific: those who can appreciate a design will be those who are from a place and time where the object is directly relevant to their daily lives. And, this relevance will count for nothing without hands-on experience. We cannot appraise a desk or a chair, a mask or a shovel, by merely looking at it behind glass in a museum: what I have called the 'aestheticization' of design on the lines of a unified theory of beauty is also an *alienation* of the object from our lives, that forces us to consider its formal properties or its look alone.

Equally, knowing the originating function of a design is also not enough: when we appreciate an object, we are concerned with its *success* in fulfilling its function: we do not award merit to, appreciate—or intentionally purchase—designs that fail, or work poorly, or are inferior in doing what they were meant to do. Kant called this the requirement of 'perfection' in his discussion of dependent beauty (Ak. 5:230), but what he seems to have meant was that we need to know not only what kind of object a thing is meant to be, but whether or not it is also a *good* thing of its kind. Those of you who have no experience of clearing 60 centimeters of snow on a February morning will be ill-equipped to appraise a shovel's design without getting outside and using it. And those of you who have never experienced snow at all will be quite incapable of appraising a shovel as a work of design. But if you *can* appreciate it, then when you do, it will be because, in part, the shovel works very well.

So my third distinction, then, can be summarised in the following way. To appreciate a given design, we need to ask of the object in front of us, "what is it?", and when we do, we do so in terms of the auxiliary questions of "what is it meant to be?", or "what is it for?", and finally, we ask "is it any good?", and those competent to give this assessment will require direct, hands-on experience with the design in question. Knowledge of originating function, I claim, is a necessary condition for the aesthetic appreciation of design.

But this gets us only so far. After all, the knowledge requirement on its own does not seem to be particularly *aesthetic*—it seems cognitive more than anything, and you might wonder what it has to do with design's beauty. It is also, in part, a merely negative constraint: it suggests that we will not find failed or poor designs to be aesthetically valuable, even if they can be beautiful in the pure or free sense of the term. But I also want to claim, conversely, that even if something works very well, like a hammer does in driving in nails, this does not on its own make it aesthetically praiseworthy: success in function may be necessary, but it is not sufficient, for aesthetic value. We need to go further to complete this sketch.

Here I will make my fourth and final distinction, between ornamentation and decoration, as I describe the notion of functional style. By 'style', I will follow the philosopher Leonard B. Meyer and define it quite narrowly as "a series of choices made within some set of constraints",[8] and I have already argued that success in function is a constraint upon the beauty or aesthetic value of a design. But within that constraint, there is choice about the *way* a design fulfills its function, and this directly

involves its form as well. While the specific function of an object is determined on an intentionalist account, form is importantly *underdetermined* and herein lies room for differing aesthetic judgements of design. The function of an object gives it ontological stability, and our knowledge of that function, even while culturally and historically specific, grounds the aesthetic appraisals we make of it as a design. But this cognitive element lacks, and even perhaps seems to impede, the normativity of aesthetic evaluation, with all of its room for disagreement and variety. One easy way out of such an impasse is to suggest that the aesthetic element of design rests solely on its form; I reject this as a reversion to the unified theory. Instead, functional style must take up both form and function in aesthetic appraisal, while allowing for a breadth of responses. Let us consider how this can be accomplished.

Equally good bicycles, for instance, can be widely different, as having hand brakes, or brakes in their rear wheels, as having 12 gears or none, as being upright or recumbent, and so on. These reflect stylistic choices in how a given design will fulfill its function. What makes one more aesthetically valuable than another? When we appraise a design, I want to suggest that we appreciate its style—the visual, auditory and tactile *result* of choices made within functional constraints that have created *this* thing in front of us instead of something else. This means that the properties that make an object a good member of its kind are actually aesthetically relevant in our judgements because they are apparent to us, and they *show up*: they are not merely background knowledge which we need to have, that we can then ignore in order to go on and have an aesthetic experience of a bicycle's formal elements alone; they are visible to us, and part of our assessments of a bicycle's aesthetic value. This also means that, unlike in cases of the pure beauty of a seashell, the complex beauty of design will always have a cognitive basis, and will always involve comparative judgements—how this bicycle achieved its goal as opposed to that one, what choices this object displays as opposed to another. When we appraise a design's style, we make an aesthetic judgement about the way it achieves its purpose, and how that way is clear in the finished product. Two bicycles may be equally good for riding, even if vastly different in the way that they achieve their function. Our aesthetic appraisal of one as more beautiful or aesthetically valuable than another will involve (i) our knowledge that it is a bicycle (and what a bicycle is meant to be), and (ii) our perception of the way that it fulfills its function, or the choices the designer made in its conception, or the style it displays as a result of those choices, in contrast with other choices, other styles, other innovations in objects of the same type or kind. The formal elements of a design reflect these stylistic choices and can lead to widely differing results. We respond to these differences and when we do, we are not responding to form alone but to the play of form and function in the finished product.

Now, it was Kant who made a distinction between ornamentation and decoration (Ak. 5: 226) which might sound strange to us now, as we tend to use the terms interchangeably in English, but the distinction is useful to further explain this notion of style.[9] Ornament, Kant claimed, can add to our aesthetic pleasure, through a play between function and form; while it is subordinate to function, it is not simply applied after the fact but is integral to our aesthetic experience of the object. Decoration, he dismissed as superficially adding mere charm or emotion, and hence as *irrelevant* to an object's beauty, or in fact perhaps even hindering it, as it speaks to merely subjective preferences at best, or even at times to the manipulation of them (Kant's example was of a gilt frame around a painting as a way of making an inferior work seem more appealing). Ornament need not always highlight a design's function, or make it look most fit to fulfill its purpose—fittingness, or seeming fit to perform a function, is not the rigid normative standard for design appreciation that I am suggesting here. Ornamentation can play with, question, down-play, or even partly conceal an object's function—but in any case, it is always taking up and *responding to* what the object is meant to be in its resultant stylistic choices. Think of the many different shapes and materials for bicycle seats, or the different colours, intensities, and shapes of bicycle lights. These are design choices that are nevertheless still related to the limitations of a bicycle needing a seat of some kind, and a light of some kind (by law, in Canada) as part of its basic function. And here aesthetic disagreement can occur: some may

think that magnetic clip-on bicycle lights are an elegant solution to more cumbersome permanent structures that ruin the lines of a bike's frame; others may find they are too likely to fall off, be stolen or appear too dim. Some find the bluish tint of LED lights not visible enough; others find halogen lights too blindingly bright. Within the parameters of function, style involves formal decisions but these are not *only* formal, or purely about form, as they emerge from, and make reference to, functional requirements. Some may find the elegance of magnetic lights a suitable price to pay for their fragility; some may prefer the boxy look of permanent structures. We can—and do, especially in design competitions—discuss, and disagree about, the advantages and disadvantages of stylistic choices in our aesthetic appraisals. And these often involve ornamentation in the Kantian sense of the term.

Now, there are also designs with no ornamentation at all. As such, I claim they have no style: the possible aesthetic choices within the object's functional constraints were simply overlooked or ignored. And without style, these objects will not be beautiful or have aesthetic value, even if they work particularly well—their value will be instrumental at best. Similarly, there are designs that are decorated or even highly decorated, where formal decisions have taken precedence over the objects' functions, or even ignored them altogether—and these will also lack aesthetic value as designs. For example, what makes most hammers aesthetically indifferent to us is their utter lack of ornament: they appear exactly as the utilitarian functional tools that they are, without style of any kind. They simply drive in nails, and do it very well. But if we consider a recent North American trend of marketing pink tools (presumably to appeal to female consumers) we find an example of mere decoration: their colour is completely incidental to, and unconnected with, their function, and in this case is, perhaps, even manipulative. The same is true of pink assault weapons sold in the United States. Decoration is indeed Pye's 'useless work on useful things', while ornamentation is the visual result of style choices that take up, and respond to, the challenge of how an object might realize its function. Ornament is never merely contingent or extraneous, and is not simply decorative.

This final distinction also has a couple of important parts. First, while it shows that David Pye is wrong in his claim that form and function are unrelated, it also does not suggest that form *follows* function, or is merely the expression of function. Designer Stephen Bayley writes of Dieter Rams that he "admitted to making last-minute adjustments to a razor design because...[it] did not achieve the effect he had in mind. He did not admit to having *styled* it, but that was what he meant".[10] Rams was concerned with how the look, or the form, of the razor would play with its purpose and how that style would achieve aesthetic effect. Even for an avowed functionalist like Rams, form mattered *as* ornamentation and *as* integral to his design.

Second, though, the styled choices in response to a design's function, while always relevant, can also lead to aesthetic failure, and detract from its beauty, when they seem to, or actually do, violate what a thing is meant to be, and our aesthetic judgements reflect this as well. When the ornamented form of an object plays too much—strays too far into making it look unfit to fulfill its purpose, as when a teapot is shaped like a cat, an armchair, or a toilet, we approach kitsch—the object, while it does work, seems so inappropriate that it cannot sustain our appreciation because it does not appear to be what it is, and does not seem like it *could* work. Shaping a teapot like a cat is not mere decoration after the fact of manufacture, like a painted cat on a standard teapot would be: it is an ornamental stylistic choice in how this teapot in particular will fulfill its function and, because it strays too far, in seeming to be inutile, or seeming to be a design failure even when not, we reject it, or downgrade it in our assessment of it. This is not to suggest that all of us do so: some like kitsch for its qualities of playfulness or 'fun'. What I am trying to offer here are some general normative criteria for aesthetic judgements of design that, while subject to rational disagreement and discussion, do not lapse into purely personal preference or 'liking'. We can imagine someone saying, 'sure it doesn't seem like it works, but it's pretty and I like it anyway'. But that, I maintain, is a purely subjective response that says more about that person than it does about the object being appraised. Aesthetic judgements, as normative, must make some gesture towards critical assessment and possible com-

munication if they are not to be mere preferential or emotive responses. When we disagree about the toilet-teapot, we can be, philosophically, talking at cross-purposes: making different *kinds* of judgements, (one of aesthetic merit, one of subjective preference), which is why my second distinction is important to keep in mind: we are interested here in specifically *aesthetic* judgements of design *qua* design.

Finally, when the styled choices of a design actually *violate* its function, as with ceramicist Carl Borgeson, who makes deliberately non-functional teapots with their lids glued shut, or architect Katerina Kamprani's open-toed rain boots that let water in, we come to the actually non-functional and will have to exclude these objects from our appraisals of design beauty altogether. Krampani's works, in their extreme questioning of, and commentary on, the purpose of typical consumer products, actually effect a category shift as per my first distinction, from design to perhaps work of art, and we respond to them differently by, for example, interpreting them for their meaning. But then they are no longer designs as such, and we are no longer making judgements of their aesthetic value *as* designs. A teapot that does not hold tea, a pair of boots that let in water rather than keeping it out, also violate the necessary condition of my third distinction: that designs need to work in order for us to even begin to appraise them aesthetically, and work well in order for us to find them beautiful.

To conclude, designs that are candidates for our aesthetic appreciation are those with functional style—that use ornamentation in the play of form within functional constraints. Designs without style may be very good and useful, but have no beauty. Adding decoration to them will not make up for, or mask, their lack of style. And ornamentation is that which augments our aesthetic pleasure—until, and unless, it serves to detract from it. Objects that appear unfit to be used (even if they can be) will fail aesthetically almost as quickly as those that do not work at all. The particular beauty of design, when taken *as* design, requires all four elements that I have laid out: that we know what an object is meant to be (through having hands-on experience of it); that we are making a judgement of the appropriate kind; that the object is successful in fulfilling its function; and that its beauty is derived from the style in which it does so. It is these elements that distinguish design beauty in particular from that of nature on the one hand, and fine art on the other, and which show us that a unified theory of aesthetic value is insufficient to account for the unique elements that make up the aesthetic appreciation of design.

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## Notes

[1] References to Kant in this work are to his *Critique of the Power of Judgement*, trans. Paul Guyer and Eric Matthews (Cambridge University Press, 2000), using the Akademie edition volume and page numbers inserted in parentheses. I make passing mention of Kant here; for a fuller discussion of the application of Kantian theory to design aesthetics, please see my *Aesthetics of Design* (Oxford University Press, 2013).

[2] See William Hogarth, *An Analysis of Beauty, Written with a View of Fixing the Fluctuating Ideas of Taste*, in *Eighteenth Century Aesthetics*, ed. Dabney Townsend, (Baywood Publishing, 1999): 209-226, and Clive Bell, *Art,* (Capricorn Books, 1958).

[3] Robert Stecker, "Artistic Value Defended", *Journal of Aesthetics and Art Criticism,* 70 (2012): 355-362, p. 361.

[4] David Pye, *The Nature and Aesthetics of Design.* (Van Norstrand Reinhold, 1978), pp.11, 13.

[5] Dieter Rams, "Omit the Unimportant" in *Design Discourse: History, Theory, Criticism,* ed. Victor Margolin, (Chicago University Press, 1984), pp. 111-113.

[6] See for example the Industrial Designers Society of America's (IDSA) annual design competition, whose categories include furniture, children's products, sports, packaging and automotive, to name a few. (See https://www.idsa.org/idea-categories).

[7] David Pye, I have argued, is guilty of just such an elision. See my *Aesthetics of Design* (OUP, 2013), pp. 32-3.

[8] Leonard B. Meyer, "Toward a Theory of Style", *The Concept of Style* ed. Berel Lang, (Cornell University Press, 1987): 21-71, p. 21.

[9] See also Aviv Reiter and Ido Geiger, "Kant on Form, Function and Decoration", *Proceedings of the European Society for Aesthetics*, vol.7 (2015): 234-245 for a discussion of the relation between ornamentation and function.

[10] Stephen Bayley and Terence Conran, *Design: Intelligence Made Visible* (Firefly Books, 2007), p. 53.

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# Design and Value: The Ethical Nature of Beautiful Design

PANOS PARIS

**Abstract:** Design theory is increasingly acknowledging the ethical nature of Design. At the same time, philosophers are becoming increasingly aware of the aesthetic potential of Design, and of its distinctive claim to beauty. Yet Design theorists and philosophers alike have failed to note the connection between the ethical nature of Design and its beauty. In this article, I argue that beautiful design is fundamentally ethical in nature. To this end, I develop what I call an axiological conception of functional beauty, whereby beauty is linked to other values, I broaden the notion of functions relevant to design to accommodate the many possible affordances of Design objects, and I argue that beautiful design is design that manifests deep, ethical, concern: beautiful design is care-full design. I suggest that this can take a number of forms, and seek to distill some of these through detailed discussion of several examples of beautiful design.

*Keywords:* beauty, design, ethics, care, value

## Introduction

Beauty has long been associated with design of some sort; design arguments for the existence of God were likely inspired by experiences of beauty in the world; while a view dating back at least to the Stoics, whereby everything is beautiful, was likewise premised upon design: everything has been designed by God, whose wisdom and benevolence could not but produce beautiful designs. Nowadays we are much less likely to be persuaded by such arguments: after all, much of the ugliness in the world appears to be the product of design, or at least intention (albeit not God's). Yet this tradition points to an important, if often neglected, aspect of beautiful design: its link to ethical value. It's precisely such a value-laden view of beautiful design that I defend in this essay.

The notion of design I'll concentrate on is the narrower, more substantive one that aligns with the way 'design' is most commonly used today (cf. Parsons 2015: 8). By contrast to the traditional sense of 'design', referring to artefacts or forms created intentionally[1] and blueprints for these (cf. Bell 1914; Fry 1920), the narrower sense refers to that subset of practices, along with their products, in fields like architecture, industrial or interior design, as well as the design of utilitarian products, accessories, software, or apps. By Design then (henceforth capitalised to distinguish it from the traditional sense) I mean those practices and products whose designs are made in studios, taught in Design schools or departments, and exhibited in Design museums or sections. I won't define Design here, but assume a good intuitive grasp of the kinds of things it comprises (for definitions, see Gal & Ventura 2024: ch. 1; Parsons 2015: ch. 1).

Now, as Design itself contains aspects of traditional design, insofar as it comprises intentionally created objects and their blueprints, it would seem that the considerations made in the opening paragraph are applicable to Design *mutatis mutandis.* Still, we should bear in mind that Design has developed its distinctive tradition and is thus guided by certain culturally specific principles and

norms, that may have been absent were some objects designed outwith its framework, but which we need to presuppose as context and constraint.[2]

Against this backdrop, I argue that beautiful Design has an ineliminably ethical dimension, in a broad sense of being linked to the humanly good. The reason for this is twofold: firstly, Design is a fundamentally ethical practice in being concerned with the creation of products by and for the use of humans; such products inevitably affect us in various ways, not least since they are ubiquitous, spanning the realms of, *inter alia*, architecture (buildings), transport (cars, trains, etc.), medicine (MRI scanners, defibrillators, etc.), communication technology (phones, smartphones, social media platforms, etc.), domesticity (cutlery, tableware, etc.). Secondly, partly because of this, functional beauty, under an axiological construal whereby it's understood as connected to other values, is the species of beauty most suitable to Design.

I begin by offering some background on the fraught relationship between form and function in Design, and the implications of this for Design aesthetics, including some prominent objections against the possibility of function-based aesthetics. Section 2 then outlines two recent accounts of design aesthetics, and argues that they fail to provide a fully satisfactory account of beautiful design. In section 3, I outline the ethical dimension of design, and argue that both philosophers and Design theorists have failed to see the link between the ethical nature of Design and its beauty. Section 4 introduces what I call the axiological theory of functional beauty, whereby beauty is linked to central values, allowing us to harmonise the ethics and aesthetics of Design. Section 5 discusses some examples of axiologically functionally beautiful Design and seeks to trace their beauty to the idea that their Design objects embody ethical care. Before concluding, I address an important objection by way of further strengthening my proposal.

## 1. Form, Function, & Problems for Design Aesthetics

### 1.1. Design: Form & Function

The notion of Design is closely tied to functional considerations, since design–the process–is always design *of* something and *for* some end(s), while the product of that process–the object–*embodies*, in this sense, such end(s).[3] Design objects are also used by people, serve users' interests, purposes, etc., whether or not these correspond to the objects' intended functions. Such functions are normally of a quotidian and/or utilitarian character.[4]

At the same time, Design objects, in being a subspecies of artefacts, viz., products of design in the broader sense mentioned earlier, possess form, at least in the traditional sense, where form comprises an object's elements and their interrelations (cf. Paris 2018; 2024a).

Yet Design objects' forms are taken to be more substantive, and it is helpful to distinguish Design from practices like engineering, where function seems paramount (cf. Forsey 2025; Parsons 2015: 20-24). This sense of form tends to be associated with the "surface" (Parsons ibid.),[5] or perceivable dimension of objects (Saito 2007:110-111), which in turn is taken as the basis of their aesthetic character. Now, while it's plausible that Design's uniqueness (aesthetically and otherwise) stems partly from its being distinct from, yet closely related to, both the fine arts, traditionally associated more closely with their formal dimension, and engineering, in turn usually thought of exclusively in terms of functionality, we should not overplay such contrasts; for, as we'll see below, we would risk misguiding our thinking about Design and obscuring important aspects of its beauty.

For now, let us simply say, uncontroversially I hope, that both form and function are indispensable components of Design (cf. Gal & Ventura 2024). In this sense, of course, Design turns out to be like much else, and might seem to call for a pretty straightforward form of appreciation: good Design is simply a matter of wellformedness for function, viz., enables the object to realise its function(s) well. To the extent that aesthetic appreciation is a matter partly of the direct experience or apprehension of an object's form, and aesthetic properties–especially those related to beauty–are

also plausibly related to form (even if sometimes indirectly, e.g., in beautiful expression), a similarly straightforward conception of Design beauty seems to suggest itself: beautiful Design at least partly consists in an object's directly apprehensible wellformedness for its function. This is indeed a highly promising starting point.

But before we say more on this, it's worth pausing at an irony: for it's precisely considerations like the functional nature of Design that have been cited as reasons against a distinctive kind of beauty in Design. While a detailed discussion of scepticism about Design aesthetics would be out of place here, I shall nonetheless outline some philosophical concerns related to the points mentioned in this section, since they throw into relief certain desiderata for a successful account of beautiful Design.

### 1.2. Scepticism About Design Aesthetics

Scepticism about beauty in Design is not indiscriminate; it'd be foolish to deny that Design objects can be beautiful in ordinary ways, in being elegant, monumental, etc. But, some think, Design cannot have aesthetic properties *qua* Design, if by this we understand aesthetic properties that depend on function(s). At least three arguments appear to support such scepticism.

Firstly, insofar as functions–which form an important part of Design objects' identity *qua* Design–are imperceptible, and their appreciation is, at least partly, intellectual, they cannot possess aesthetic properties. This argument is based on a principle, accepted by many contemporary aestheticians,[6] whereby aesthetic properties depend on sensory properties; hence, only if an object possesses properties perceptible through the senses (in fact, only the distal senses) can it possess aesthetic properties. Hence, Design objects' aesthetic properties are limited to their non–functional aspects.[7]

A related, second argument,[8] suggests that functional objects cannot possess aesthetic properties in virtue of their functionality. That's because, according to another firmly entrenched tenet in aesthetics, aesthetic judgements are disinterested, and distinctively unconcerned with practical matters. If so, then the question of whether an object is successful at performing some function, or indeed suitably fashioned to perform it, is irrelevant to its aesthetic value. But Design objects' performance *vis-à-vis* their functions would seemingly have to be factored into the aesthetics of Design *qua* Design. Hence, there cannot be such aesthetics.

A third argument against Design aesthetics takes issue with the concept of function itself. Objects perform all sorts of functions, and it's not clear which of these should factor into an aesthetic appreciation of Design, nor how or why they should do so. I use my chair as a clothes rack, decorative object, etc. Are all of these my chair's functions and relevant to appreciating its beauty? Are they a chair's functions more generally?[9] In the absence of clarity about this, there cannot be an aesthetics of Design, at least not one similar to art or nature aesthetics.

## 2. Towards an Aesthetics of Design: Dependent & Functional Beauty

Faced with such difficulties, one might abandon the quest for a theory of beautiful Design. Perhaps this explains why Design is at best a peripheral topic in aesthetics, despite its prevalence and extraordinary influence on our lives, behaviours, etc. Fortunately, this has begun to change recently. In this section, we look at two important recent accounts of the beauty of Design.

### 2.1. Dependent Beauty & Functional Style

Jane Forsey (2013; 2025) has developed an aesthetics of Design based on Kant's account of dependent beauty. According to Kant, beauty and its judgement are, at their purest, disinterested, in the sense of being independent of considerations and a concept concerning "what the object ought to be", which in turn rely on understanding the object's kind (cf. §1.2). But there is another kind of "merely [dependent] beauty [which] does presuppose such a concept and the perfection of the object in accordance with it" (2001: 114). For Kant, then, while some objects, like flowers,

delight us merely through their shapes, colours, etc.; others, like horses, delight us through their being excellent instances of a kind–so that appreciating their beauty requires knowing what a perfect instance of them would be like (or having a range of comparison cases against which we can assess a given instance).

Forsey extends Kant's account to Design, arguing that its beauty is a matter of our subjective response of pleasure to how well the object in question performs its function. Its function, for Forsey, is specified intentionally, i.e., is what the object was meant to do, as opposed to how it happens to be used (2025: p. 38). To appreciate this, in turn, we need to use the object (it's not just how it looks that matters) and to compare it to alternatives (not necessarily consciously). Forsey's wonderful example is her classic Bialetti Moka cafetière, which I too love using every morning and for which I have yet to find a superior alternative. Her contrast Design is the Vev Vigano Itaca Oro by Alessi. Although the latter may look better, it's less beautiful *qua* Design, because of features like its brass handle, which, unlike the Bakelite Bialetti handle, conducts heat and makes it difficult to handle when hot, a familiar problem with much careless kitchen-utensil Design.

In her latest work, Forsey explains that beautiful design is a matter of 'functional style'. This, in turn, depends on the object's being a product of choices that concern how the object will look *vis-à-vis* its function, provided it's good at realising the latter. For, she clarifies, objects like hammers that are not designed with a concern for their appearance–or do not use "ornamentation in the play of form within functional constraints" (2025: p.42)–are not beautiful.

### 2.2. Functional Beauty

A second contemporary account is Parsons & Carlson (2008)'s theory of functional beauty. In a nutshell, functional beauty consists in an object's looking fit for its function(s).

Parsons & Carlson substantiate their theory with analyses of its central components. Specifically, they argue, the functions that matter aesthetically are objects' proper functions, viz., those belonging to the object, as opposed to ones being incidentally imposed on it by users. Another way of bringing out the intuitive contrast between proper and other functions is to speak of the difference between an object's *having a function* F and its *functioning as* F. Parsons & Carlson offer a theory of such proper functions, whereby artefacts' proper functions are those that have contributed to the reproduction of that artefact type because of its ancestors' meeting some need or want in the marketplace in virtue of their performing function, F, which in turn led to the manufacture and distribution of such artefacts (cf. Parsons 2015). Additionally, Parsons & Carlson borrow Walton's (1970) influential framework in order to show how such functions can be made aesthetically perceptible and affect an object's aesthetic value.

These resources allow Parsons & Carlson not only to get around the issues discussed in §1.2 above, but also offer a substantive account of functional beauty, detailing different subspecies of it (cf. Parsons 2015: 118-120), and making their account especially nuanced and widely applicable.

### 2.3. Problems with Current Theories

Both Forsey's and Parsons & Carlson's accounts have, I think, made enormous progress in philosophically substantiating a Design aesthetics. Moreover, they offer aestheticians interested in Design invaluable theoretical resources. Still, I don't think that they are entirely successful, and in this subsection, I discuss certain shortcomings that I think are important and common to both accounts. This will also help us see what's required of a satisfactory theory of beautiful Design.

The first problem is that both accounts–even while going beyond the immediately perceptible or visible qualities of objects–ultimately rest their theories on what I would call a superficial, sensory level. Parsons & Carlson's account focuses on looking fit and clearly distinguishes this appearance from an object's actual performance or its potential for actual performance *vis-à-vis* its function. Forsey takes more heed of how well an object is adapted to realise its function, and requires using

the object, spending time with it, etc., before one can fully appreciate its beauty. This, she explains, is because to be genuinely a matter of Design beauty has to depend on how well the object performs its intended function. Yet, given her (2013) insistence to maintain the distinction between the beautiful and the good, as well as her more recent elaboration of this view through her notion of functional style (2025), she ultimately seems committed to holding that such beauty does not wholly emerge from the object's being well formed for its function; instead, it is constrained by, or dependent on such wellformedness for function, its proper source being how the object looks given these functional constraints.

Such a sensory focus is problematic both because Design functions are largely intelligibly appreciable features of an object, but also because some Design is purely conceptual or abstract–like software Design, or even the Design of digital platforms, where fitness for function stems not so much from any sensory appearance, but from how they are structured to guide attention towards various places, and make the whole experience smoothly navigable. In this sense, much Design is strikingly similar to abstract objects like mathematical proofs or scientific theories, which likewise have properties like beauty, partly in virtue of their fitness for function (cf. Paris 2020), but whose beauty is not in the slightest related to how they look or to any perceptual feature they may contingently have in their visible manifestations (e.g., when written down). Perhaps the reason that Parsons & Carlson and Forsey restrict their accounts to the sensory features of things is to eschew the difficulties we discussed earlier in §1.2. Specifically, focusing on sensory features shows how, on the one hand, Design beauty respects the dependence of aesthetic properties upon sensory ones; while, on the other, it does not wholly depend on goal–directedness, thereby respecting so–called 'disinterestedness'.

Yet if those who have argued for mathematical beauty, beauty in games like football and chess, or moral beauty, are at all to be trusted, we need not worry about these objections, which seem more like philosophical prejudices than genuine constraints on aesthetic reality, as it were (cf. Paris 2024a; 2018; 2020).

A second problem is that both accounts use 'beauty' in a broad sense. In other words, they are more interested in aesthetic value in general, which includes many properties besides beauty, like the sublime, tragic, monumental, or funny, than the more narrow and everyday sense of beauty. While perhaps philosophically more elusive, this latter sense of beauty plausibly refers to a specific kind of value, or property, the mark of which, for lack of a more widely agreed upon feature, is its capacity to elicit pleasure in its appreciator (cf. Scruton 2009; Levinson 2011). While Parsons & Carlson and Forsey occasionally mention pleasure, they are quite explicit that it's the broader sense of beauty that they have in mind. This will also become apparent in §2.4 below, where we shall see how their accounts have the implication that many objects count as beautiful that are far from pleasing or beautiful in the narrower sense.

Before I argue for this last point, I should mention a third, related problem with available accounts of Design beauty. This is that, for all their insistence on incorporating function into an account of Design aesthetics, they actually end up losing sight of the object's functions themselves as opposed to merely the way in which the object is construed to realise them. To put it differently: they look at the instrumental relation between form and function, rather than the more intrinsic one, which requires seeing the embodiment of the function in the form. This, I think, prevents Forsey's and Parsons & Carlson's accounts from being genuinely sensitive to Design as not just a discipline and practice that combines form and function, but as one that is deeply embedded in a sociocultural framework of beliefs, desires, interests, customs, and so on. Even Gal and Ventura, otherwise admirably pluralistic and sensitive to the polymorphousness of design, refer to design as a "discipline combining function and aesthetics" (2024: 120), thereby driving a wedge between these two dimensions. Such a way of thinking is understandable, given the radical narrowing that our concept of the 'aesthetic' has undergone since the nineteenth century and how far it's moved

from its etymological and conceptual predecessors in the Greek *aesthesis* (from which 'aesthetics' is derived, and which, contrary to popular translations, denotes feeling, not just sense perception) and *kalon* (which was the standard ancient Greek term for 'beautiful').[10] But this does not mean that it is correct. On the contrary, I feel that it fails to do complete justice to the aesthetics *of* Design, which, due to the *nature* of Design, should integrate function fully. This is a shame not just for Design theory, but also because, given the affinity between Design and the broader field of purposive or teleological fashioning, such a theory would shed considerable light on the aesthetics of much else besides Design.

Now, this centrality of function for Design and so for an account of its beauty *qua* Design, notwithstanding the importance of form, is a central assumption in my argument below, and one that seems particularly pertinent if we take seriously certain claims made both by Forsey (2013; 2025) and Parsons (2015: chapter 1). Specifically, on the one hand, that in Design and its appreciation we should not lose sight of the importance of users' perspectives and how a given Design affects them. On the other hand, Designers, by contrast to builders or craftspersons, are primarily planners and overseers. For, if so, then Design appreciation should concern itself neither with superficial form nor with fitness for function in isolation, but with an intimate appraisal of the form-function complex. This, in turn, suggests that the appreciation of Design *qua* Design–perhaps more so than that of art or craft (though I do not wish to commit to this claim)–should more fully encompass considerations of what the object's function *is*.

This should have been obvious all along, since it's impossible to assess an object's fitness for its function without somehow apprehending or experiencing its function in its form. But perhaps what's less obvious is that, given our psychology, what an object's function is will factor into our response of pleasure or displeasure in apprehending an object no less than will its form. This is perhaps best seen through a brief exploration of indifferent and ugly design, which shall also help substantiate the concerns with available accounts of the aesthetics of Design we've just looked at.

### 2.4. Indifferent & Ugly Design

Let's begin with an example from Forsey (2025). She observes that beautiful Design is more than an object's being fit for its function, offering a plain hammer as an example of something fit for its function that cannot thereby be beautiful. But why, one might ask, isn't the hammer beautiful, since if heavy, rigid, and easy to handle, it's perfectly fit for its function? Is it really because it does not have what she calls functional style, so that it's not especially visually conspicuous? This is far from clear to me. Consider the defibrillator, another perfectly plain piece of contemporary Design; or consider blood pressure and oxygen monitors. I submit that, provided that we open-mindedly contemplate their literally life-saving Design sophistication, they should not strike us as aesthetically indifferent. On the contrary, it is plausibly their very visual plainness, which throws their functions into relief, that makes them beautiful. This suggests that if certain Design objects are aesthetically indifferent, this cannot be simply in virtue of their sensory appearance; instead, they are indifferent at least partly in virtue of their function, which is *embodied* in their form.[11]

Some examples of ugly Design will, I think, shed some more light on this suggestion. Assuming that ugliness is the contrary of beauty (cf. Paris 2017), they may also give us some idea of where to look for beautiful Design.

Now, Design ugliness can come from an obvious source, if accounts like the above are on the right track. Deformity, in the sense of poor form for an object's function, is at least a *prima facie* basis of ugly Design (cf. ibid.). Here, however, I'm more interested in cases where a Design may be ugly but not straightforwardly deformed.

Consider a standard thought experiment in aesthetics involving an experiential shift (cf., Eaton 1999; Paris 2018). Suppose that we're walking around town and, passing under a bridge, you remark upon how nice those thorny concrete patterns are on the side of the pavement, nicely

breaking up the uniformity of tarmac and concrete of the built-up city's tapestry, lending it a stellar quality. 'Beautiful Design', you say. But then I explain that their function is not to titillate walkers' visual interest, but to prevent the homeless from finding shelter from the elements and sleeping there, and that they're known as 'homeless spikes', and form part of a broader 'tradition' of 'defence architecture'. As far as 'functional style' and 'looking fit' go, 'defence architecture' does rather well: both visually intriguing and fit for its functions. Yet, precisely because of their good design, even though a moment ago you found them beautiful, you now find them ugly and are disgusted by them (at least, if we're walking together, I hope you do). Are we eccentric in this respect? Perhaps, but if so, then so is a Guardian columnist who has had experience of sleeping rough, and who wrote of such Design that it makes "life … uglier for all of us" (Andreou 2015).

### (a) Insensitive or Cruel Design

This, I believe, is an example of cruel or insensitive Design, viz., manifesting a blatant cruelty and disrespect towards members of the community and, precisely because it's so carefully thought out to realise its function, it is, I submit, strikingly ugly. Examples of insensitive Design abound and can contribute to highly discriminatory tendencies through manifesting racist, sexist, or ableist traits,[12] but, on the whole, it comprises objects whose Design manifests an indifference towards people's diversity of traits, needs, and circumstances, which can range from insensitive to dehumanising. Such design can be ugly even if it is visually rather intriguing or playful. For instance, in one my institution's newest lecture theatres, the side walls are decorated by a series of thin wooden panels, resembling an op-art piece, prominent enough to disorient even neurotypical individuals, let alone individuals who are neurodivergent, epileptic, or suffer from eye conditions, migraines, etc.[13] This brief description alone hopefully illustrates the insensitivity of such Design.

### (b) Manipulative Design

A variant of such cruel Design is manipulative Design. This ranges from features in the Design of products like smartphones that make them addictive, e.g., using red for notifications, etc.; to the graphic Design in advertising. These typically seek to forge sub-personal associations between a product and highly desirable things like happiness, love, sex, etc., where such associations are arbitrary and contingent at best, dangerously misleading at worst (to put it bluntly: regularly eating at McDonalds will make you neither healthy nor happy).[14]

### (c) Irresponsible, Complacent, & Arrogant Design

Design's ability to function not just for obvious utilitarian purposes, but also in expressive, symbolic, or, indeed, identity-forming ways points to another source of ugliness.[15] This stems from Design that serves to either self-aggrandise or signal inappropriate traits. For instance, the instantly recognisable Louis Vuitton handbag[16] or Balenciaga sock-shoe inevitably draw attention to their price tag, signalling the owner's wealth and social standing. In some cases of hyper-minimal, or even visually ugly design, one's social standing is signalled either by one's being in fashion, or possessing refined sensibilities that enable them to see the value in the apparent disvalue, in a tune of self-aggrandisement that chimes with that found in some forms of appreciative practices in the contemporary artworld.

Irresponsible Design also occurs with respect to the natural world. The UK has an atrocious record of environmentally unsustainable and ecologically harmful building work (Fuller 2022; Davis 2020) with many large developments and regeneration projects being ecologically myopic at best, environmentally disastrous at worst. An example is the recent 'regeneration' of Cardiff's Central Station square, which has been covered in concrete and has had high-rise buildings erected around it, greeting the visitor with what can only be described as a bleak view of the city, and a couple of trees ticking the 'green-regeneration' box seen in the vicinity. This is all the more outrageous given that Cardiff's most valuable assets are its green spaces.

But there are also genuinely dangerous examples of inappropriate Design. For instance, consider lethally fast and large automobiles, or car Designs exuding airs of aggression or self-assurance, when what's needed on our roads is safety, humility, and discretion. Or think about 'beauty apps' that prescribe standards against which users assess themselves, targeted to women, including young girls, with devastating effects on their self-esteem (cf. Paris 2022b).

If I'm right that such examples of Design can be called ugly upon understanding their function(s), then they seem to gesture towards something important that alternative accounts lack: a normative dimension inherent in the functional nature of Design that should feature centrally in a theory of its beauty.[17] Such normativity concerns not just fitness for function. On the contrary, the examples I've given above perform their functions perfectly well–sometimes too well. But they seem all the more ugly for that. Why is this? I submit that it's because Design is a highly ethically charged practice, its products being woven deeply into the fabric of our social, cultural, political, and ideological tapestries. Let us take a closer look at this aspect of Design before, finally, offering a theory of Design beauty that's fit for purpose.

## 3. The Ethical Nature of Design

Although largely neglected by moral philosophers, Design theorists are vocal about the power of Design over us, some going so far as to claim that it "controls our whole life – our whole happiness depends upon it" (Grillo 1960: 15; quoted in Parsons 2015: 27). While perhaps an overstatement, anyone who thinks that it's a gross one should think again. Just consider how smartphones, laptops, or social media have changed the way we behave, but also how they've shaped how we think about ourselves, consequently affecting our mental health and shaping our visual, tactile, conversational, gustatory, and social ways of navigating the world (cf. Paris 2022b).

It's clear that design has ethical dimensions. Crudely put, products of Design are products of human purposeful activity, intended to perform some function, or realise some end that, presumably, meets some people's needs, satisfies their desires, or realises their ends. Indeed, on some occasions, those desires, needs, and interests are themselves products of Design, something that former Apple CEO, Steve Jobs, knew well (cf. Gal & Ventura 2024: 150). Insofar as actions, intentions and interests are all amenable to ethical evaluation, Design, too, is subject to such evaluation, perhaps more clearly so than art.

Unsurprisingly, then, several Design theorists have emphasised the ethical aspects of Design. For instance, Papanek (1971) emphasises the moral responsibilities of designers, on the grounds that they populate our world with objects, many of which shape our attitudes, thinking, and even desires and needs, while some–like cars–have the potential to become either safe transporters, or lethal weapons, never mind their social-signalling implications, and their associations with certain ethically questionable norms (like masculinity, power, etc.; see also §2.4.3 above).

Others such as Fry through his notion of 'defuturing' (2020), go even further. Design, Fry argues, contributes to destroying our world and the prospects of a future, or at least one worth living in–this is what his notion of 'defuturing' refers to. This is partly because Designers conceive of their discipline as concerned with spatial, material production. Instead, Fry suggests, Designers should reconceive theirs as a temporal discipline, shifting their work towards 'futuring' (2009), viz., safeguarding a worthwhile future. Though this may sound odd, Fry's point is that good Design should face up to its potential to shape our future, either by destroying or preserving and enhancing it–a Design project that he calls 'redirective' (2020: 47). According to Fry, then, Design ought to take seriously its political and civic aspects, become mindful of contemporary concerns, and create forward-looking and sustainable products (cf. Gal & Ventura 2024: 42-45).

Such theories are commendable for highlighting the ethical import of Design and alerting Designers to it. After all, failure to notice the ethical side of Design is itself an ethical flaw and a symptom of our contemporary tendency, especially prevalent in academic thinking, to over-

compartmentalise and over-specialise. But Design should be resistant to these ideologies, given its hybridity and its embeddedness in culture, with the diverse ethical, social, political, ideological, and other dimensions that this entails, all of which should be reflected in its understanding and appreciation.

Even Design theorists like Fry and Papanek, however, tend to see the ethical nature of Design as distinct from its beauty. Hence, they have faced resistance from theorists who adopt more descriptive, formalist views of Design, for failing to take the importance of aesthetics into account (Gal & Ventura 2024: 45-56).

Conversely, as we've already seen, the best philosophical discussions of Design aesthetics appear to be strikingly amoral. This is not because philosophers are unaware of moral or indeed practical or other issues with design, but because they, too, think of these as properly distinct from aesthetic considerations (cf. Parsons & Carlson 2008: 150-155; Forsey 2013: 195).

One explanation for such omissions may be the apparent absence of a suitable theory of beauty.[18] Yet I do think that there is such a theory, consisting, as it happens, in a particular construal of the theory of functional beauty discussed earlier.

## 4. Axiological Functional Beauty, Design, and Ethical Value

We have already seen that recent accounts of beautiful Design aren't really about beauty *per se*, but aesthetic value in general.[19] More importantly, they fail to fully appreciate Design's fundamental interplay between form and function. This, we saw, is largely because they ignore *what* the object's function is, except insofar as it informs *how* an object's form is shaped to realise it (or appear to realise it). Taking the object's function truly into account inevitably leads us down an ethical route, one that's been tread by several Design theorists. Such theorists have, however, in turn failed to appreciate the link between Design's ethical nature and its beauty.

In this section, I offer an alternative account of beautiful Design that does justice not just to the ineliminably functional nature of design, but its ethical nature also. Specifically, I adapt an alternative account of functional beauty that I recently developed elsewhere (Paris 2020), and which is designed to do three things.[20] First, to be immune to the numerous counterexamples facing theories like Forsey's and Parsons & Carlson's that stem from their failure to take seriously Design objects' functions (see §2.4). Second, to avoid the tendency–rife in aesthetics since the nineteenth century and only recently challenged (by, *inter alia*, Paris 2018; 2024a; Doran 2021; Stecker 2019)–to associate the aesthetic exclusively with the distally perceptible (see §1.2). And, third, to serve as an account of beauty proper, which I take to consist, at least partly, in pleasing form (see §2.3; cf. Paris 2024b).

On my account of functional beauty an object is functionally beautiful when it is well-formed for its function and its wellformedness also pleases most suitably qualified appreciators when experienced either perceptually or intellectually (i.e., in contemplation) (Paris 2020: 521).

This is an unabashedly hybrid account, comprising formal, functional, and subjective conditions. Yet it thereby correctly predicts that the kinds of objects that I earlier suggested were indifferent or even ugly despite being well-formed for their function will not be beautiful. That's because, plausibly, they will fail to please suitably qualified appreciators.

This, of course, raises several questions, including: what does wellformedness for function consist in on this account? Moreover, the account appears to contain a major loophole: its second condition stipulates that the wellformedness in question must be pleasing. But why is this?

### 4.1. Axiological Functional Beauty & Pleasure

Firstly, I note that the gap between wellformedness and pleasure is not just hedging: the combination of the two conditions does theoretical work by specifying what the intentional object of the pleasure is. Furthermore, in showing that it's objects' form,[21] it arguably shows that it's *bona fide*

aesthetic. But, based on the arguments made so far, I think that we can, at least tentatively, say something more substantive. I suggest that what determines, or at least partly explains, pleasure in Design objects meeting the wellformedness condition in my version of functional beauty is the value of their function and the way in which they realise it. This explains why torture instruments, for instance, remarkably well-formed for their functions though they may be, are more likely to displease, even if they are visually exquisite. It also explains why something as visually simple as a defibrillator or oximeter may strike one as beautiful.[22] In this way, this version of functional beauty is the species of beauty that is conversant with other values *par excellence*. So let's call it the *Axiological* theory of Functional Beauty, or AFB, for short.

### 4.2.1. AFB & Functions

Identifying the relevant kind of function in the aesthetic appreciation of Design is among the thorniest tasks. We've already seen two different takes in Forsey's intentionalist and Parsons & Carlson's evolutionary accounts. What's common between these is that they see only one kind of function as aesthetically relevant to Design (what Parsons & Carlson call 'proper' function).

AFB was originally also couched in terms of proper functions, though more pluralistically assuming that some combination of intentions and evolutionary considerations would specify artefacts' aesthetically relevant function(s) (2020: 521). However, it now seems to me that Design theory reveals that restricting Design objects' aesthetically relevant functions to their 'proper functions' is inadequate. For such artefacts can be multifunctional in unanticipated ways, and it's plausible that their functions evolve in response to users' employment of them, as well as in light of what Gal (2022) calls their 'affordances', namely functions or uses that they promise to, or are capable of realising, regardless of whether they or their ancestors did or were intended to do so. This is not to say that any use an object is subjected to should be seen as a function belonging to the object or as being aesthetically relevant. But it does cast doubt on the prospects of devising a theory that readily identifies a Design object's aesthetically relevant functions.

In lieu of a theory, I suggest that we see objects' relevant functions as open-ended and specified by a number of different considerations, including what keeps certain objects in the marketplace, what designers intended, as well as what use people are consistently making of the items, and what functions an imaginative, responsible, and expert appreciator can distil from the object. This is a pluralist view that leaves much to the interpretation and exploratory use of objects.

Now, upon specifying an object's *bona fide* function(s), which I assume can be done, though perhaps on a case-by-case basis, wellformedness can be straightforwardly relativised and assessed in light of each of an object's functions both individually and jointly. This sounds easy in theory but will, no doubt, be a delicate, complicated, and in most cases ongoing affair in practice. Yet this is no objection to the account. On the contrary, it's the price we pay for acknowledging and respecting the richness and diversity of Design objects, as well as their embeddedness in our multidimensional lives–comprising *inter alia* social, political, ethical, epistemic, sensory, emotional, imaginative, and, of course, practical aspects. This price, moreover, I submit, is worth paying, not least as it's compensated for by our account's potential to illuminate the nature of Design beauty and its appreciation, as I'll shortly argue.

### 4.2.2. Hierarchies of Function & the Evolution of Design

The intuition behind philosophers' insistence on proper functions is, I think, that it's obvious that many, if not most, functional kinds–desks, chairs, tables, lamps, houses, public buildings, computers, cinemas, mugs, glasses, medical devices–have certain functions that are central to them; so central, in fact, that they lend them their identity. It is reasonable to think that these should also play a central role in their appreciation. Notwithstanding this, many of these items have been made for a long time, over the course of which their designs' functionality has (apparently at least) reached its peak.

It's difficult to imagine improving on the best pint glasses that we've already got; we know how to make pint glasses that need no improvement in their Design when it comes to realising their function. This allows us to experiment with other dimensions of theirs, including introducing expressive or novel elements in their Design. After all, their function isn't all that important–sure, it's nice to drink beer, but there are more important things in life.

Jokes aside, this reveals an important point: objects can realise more than one proper function and can also have other functions besides their proper ones. Some functions may also be more important or valuable than others. It's even possible that some non-proper functions are more important than proper ones (cf. Gal & Ventura 2024: 131-132, 137).

This is especially plausible once we think that the evolution of a functional Design-type has reached a zenith.[23] For instance, an opera house should, in the first instance, work well to accommodate the audience, house an orchestra, provide space for rehearsals, tailor its acoustics to operatic standards, etc.[24] But, increasingly, opera houses perform other functions too, including bringing the community together, being welcoming to diverse and variously abled people, etc. Even though the latter don't seem like an opera house's proper functions, this does not diminish their importance, which in some cases may even be more important than the building's primary function(s). This is particularly so at a time when our cities look like concrete billboards, and are thereby becoming increasingly alienated and decreasingly hospitable to civic values.

It may help here to introduce some terminology to help us keep track of things. Let's call an object's most central proper function(s) primary function(s). In addition to these, there may be further, secondary, i.e., less central, proper functions. But there can also be primary, secondary, tertiary, etc., non-proper functions; let's borrow the term 'affordances' to refer to such functions so as not to mix them up with proper functions. Each of these functions and affordances may be more or less ethically valuable.

What I'd like to suggest is that, given our construal of AFB, in appreciating Design, we often need to balance a rich network of axiological dimensions that may involve complex interplays. At the very least, we need to assess both an object's wellformedness for its primary functions and the significance and value of these. But often, there will be more. For instance, there may be secondary and tertiary proper functions and their respective degree of wellformedness and value to add to the equation. And there may further be primary, secondary, tertiary, etc., affordances (that may not be proper functions but that can plausibly be said to be functions belonging to the object nonetheless) whose wellformedness and importance needs to be factored into our judgement and appreciation. The final equation, of course, will comprise the totality of these alongside any interplays between them.

Now, on this picture, I think that AFB predicts that some objects will turn out to be beautiful simply in virtue of their wellformedness for their primary function. The hammer could be one of these, but even more so the defibrillator and portable blood pressure monitor, whose wellformedness for their primary proper function is pleasing insofar as that function is so important and valuable to us. Likewise, given the presence of 'defence architecture' that we encountered in §2.4.1, and which encompasses objects like wavy benches or benches with dividers, that serve a secondary proper function that we find insensitive, we might also come to find that the humble, ordinary bench, nowadays sometimes labelled 'welcome bench', which arguably just serves one proper function (allowing people to sit together), is actually more beautiful in virtue of realising a secondary function, of which we may have been unaware: offering those who need it a spot to lie down.

Other objects, however, like a lemon juicer or a jug, especially today, given the many highly functional alternatives available, may need to do more to be noticeably beautiful. Gal & Ventura (2024) mention the Juicy Salif lemon juicer's functioning as a conversation starter. Now, on my account, this isn't an example of beautiful Design, not least because it's poorly formed for its primary function. But it's also not beautiful because, while performing well its conversation-starter function, it's also a vanity signal (like some of the examples we discussed in §2.4.3) partly because of

the way its primary proper function is undermined by its secondary one. By contrast, however, the humbler, yet iconic, gluggle jug, performs its primary function just fine (indeed much better than one might expect looking at it), but is additionally, like the juicer, also a conversation starter, and a joyful one at that, not least because of its gurgling sound when pouring. It also invites its users to engage in what Gal (2022) calls visual metaphors, viz., visual-conceptual associations formed through imaginative play. The reason this is beautiful while the lemon juicer is not is, I think, the latter's deformity for its primary proper function, and the way it gives rise to a manifestation of vanity when combined with its secondary function are disvalues. By contrast, the invitation to visual metaphor and the joyful, simple, yet imaginative, way in which the gluggle jug serves as a conversation starter, is a valuable way of performing an important function, namely convivial socialising, whilst harmonising with its primary proper function.[25]

This last set of examples reveals yet another feature of my account, namely that it treats the distinction between form and function as inextricably porous. For the aspects of the gluggle jug discussed above are ones that alternative accounts, like Forsey's or Parsons & Carlson's, would probably treat as formal. However, on my account, they are part of the object's wellformedness-for-function; in other words, they are both formal and functional.[26]

## 5. The Ethical Nature of *Beautiful* Design

We now have the resources to accommodate the ethical nature of beautiful Design within a plausible philosophical account of a species of beauty–in other words, to see that aesthetics and ethics, formalism and functionalism, beautiful and ethical Design, are not in conflict: axiological functional beauty brings them together. The ethical features of design are easily seen as part of its functions, whether these are traceable to qualities that we would normally designate as formal–like the playful, expansive, richly associative character of some Designs, like the gluggle jug, which serves as a non-self-aggrandising dinner conversation starter; or the economy and simplicity of some designs, like a Mac computer's hardware and operating system, that makes them remarkably accessible;[27] or whether they stem from more obviously utilitarian qualities, like those of the defibrillator and 'welcome bench'.

Below, I discuss some examples, mining them for insights on the varieties of beautiful Design, and attempting to trace them to more fundamental aesthetic Design principle(s). I begin with a detailed case study that encompasses multiple aspects of beautiful Design.

### 5.1. The Stavros Niarchos Foundation Cultural Centre, Athens, Greece: A Case Study in Beautiful Design

I write this in a reading room of The Stavros Niarchos Foundation Cultural Centre (SNFCC), designed by Renzo Piano and his team, surrounded and often distracted by nervous pupils revising, university students completing coursework, and fellow researchers, all of us reading, writing, looking out the window. Curious members of the public wander in to sneak a peek. Out the window, a stretch of space with a water canal flanked by the homes of the Greek National Library's collection, to my left, and National Opera, to my right. Around it, children play, couples frolic, groups have work meetings, and friends hang out. Further afield, among other native plants, olive trees, cypresses, pines, rosemary, and lavender adorn the grounds and adjoining park, which extends over our heads. The structure that houses all of this is made mostly of solid concrete in simple horizontal, upright, and diagonal lines. It rises to a moderate height, yet enough to provide panoramic views of both the sea on one side, and the Acropolis on the other–two features that lend Athens part of its distinctive flair. Strictly speaking, it's not the building that rises, as it's built underneath an artificial slope which features the aforementioned park, and atop which stands a massive canopy that shelters a roof-terrace. The façade, out of which I'm gazing, stretches along the canal and largely comprises of large glass panels that illuminate the space, whilst allowing those outside to see inside.

This two-way openness and transparency lend the SNFCC a sense of community and sociality, making potential visitors feel welcome to enter and explore the site. And that's precisely how the SNFCC was greeted by Athenians and tourists from all walks of life, cultures and subcultures–old, young, variously-abled, metalheads, skaters, runners, students, businesspersons, opera-lovers–who immediately flocked to spend their time there, making the SNFCC one of the Greek capital's best loved sites.

At the same time, the fact that the building itself, and the cultural venues that it houses, stand underneath the park, which extends along the sloping roof, seems highly suggestive. In my view, it expresses a harmony and delicate balance between the values of nature and those of the arts and sciences, such that the collapse of the latter–of what we may call humanitarian values–spell the collapse of the former. Likewise, the views it provides of the Acropolis, on the one side, and the sea, on the other, seem premised upon that delicate balance, as though it's only by traversing through these values that one can look upon the city and see it clearly.

The physical qualities in the SNFCC's Design are similarly expressive. The overall impression one gets from a building like this is of a mix of solidity and transparency. The building is imposing, yet inviting, multifaceted and at an angle, yet accessible and digestible. It is both heavily grounded, but also rises with an air of lightness. What these wonderfully balanced pairs of contrasts suggest, at a further level of interpretation, is that entering the world of arts and letters, and espousing humanitarian and environmental values, presupposes a foundation that takes time, effort, and solid materials–both literally and metaphorically–to build and appreciate.

All of this is available to the reflective appreciator through a perceptual encounter with the building. But the most cursory research rewards further curiosity, adding a layer of imperceptible beauty to what can be glimpsed from a reflective tour of the site. For instance, we find that the slope was premised on a number of ideas. It was inspired by a place-name: Kallithea, or 'beautiful view'. That's the area where the SNFCC was built, which in antiquity offered a view of Athens' first port of Phaleron. Yet this flat and densely built area, cut off from the sea by a large highway, had not offered such views in decades. Piano sought to rectify this and, in doing so, exploit the city's two major resources–water and solar energy: the canal draws water in from the sea and the sloping roof collects rainwater, creating reservoirs of useable water, while the structure is crowned with a 'green roof' featuring 5,600 solar panels powering the building.

The large space where people gather around the canal was similarly inspired by historical associations, designed to function on the model of the ancient *agora*, the civic centre of town in ancient Athens, where citizens came together to socialise, but also shop, address civic matters, etc. Similarly, the SNFCC's agora provides "a true point of convergence, bustling with people, a perfect meeting and conversation spot where the ideals of Art and Beauty are revived" (SNFCC website; cf. Gal & Ventura 2024: 147-149). While unlikely to turn everyone into a bibliophile or opera enthusiast, it sends the message that the arts and letters are central to the city's identity, and they are proximate, familiar, and accessible.

Importantly, all of the above are not just superficial Design gestures. Athens is a city prone to earthquakes, and great care was taken to ensure the building's resilience to these natural phenomena, through a highly sophisticated seismic isolation model, which testifies not just to the designers' concern for the visitors to the site, but also the value attached to what the building encases: the world of Greek arts and letters (Giarlelis et al. 2018). Likewise, the opera's design was thoughtfully conceived with a view to both the history of Greek opera and the latest science of acoustics (Bassuet 2012). Making the building sustainable was yet another major concern, as evinced through the aforementioned sloping roof-terrace and green canopy that harvest reusable water and solar power (Makowska 2021), as well as the overall space given to nature–Athens being a city desperately lacking in parks.

In sum, the SNFCC's Design embodies deep concern for certain values–art, knowledge and nature, as well as the life of a community through which the foregoing flourish or perish–along with the desire to nourish, showcase, and share them. This is not just superficially expressed in its visual appearance; it can be felt through its use, and established through examining its inner structure: that's precisely where its beauty inheres.

## 5.2. Beautiful Design: Its Varieties & Source(s)

### (a) Ecological & Value-Based Design

One of the SNFCC's important functions is adding ecological value to the city, which is partly where its Design beauty lies. As we've seen, it's not through the presence of features that merely appear ecologically-minded that the SNFCC is beautiful, but through their orchestration towards performing their respective ecological functions. For it's perfectly possible to appear sustainable but fail to be so: much contemporary housing built by corporate developers in the UK does precisely this (cf. §2.4.3). An exception to such hypocritical Design, and a clear example of ecological Design beauty is the Greener Grangetown project in Cardiff, designed by Arup. This is a sustainable urban drainage project that makes use of natural resources, including the nearby river Taff and newly-planted robust native trees and rain gardens that naturally purify most rain water before redirecting it to the river. This replaces a system where water travelled eight kilometres through a costly sewage system to be treated, before finally being discharged into the sea. It is, I think, evident how this Design is well-formed for its ecological function and, I submit, all the more beautiful for that.

Such Design not only shows care and concern for the environment, but also civic responsibility, for such projects contribute to the city's efficiency, improve air quality, create greener spaces, thereby fostering values that ultimately enhance the communal and individual wellbeing of its people (cf. Paris 2022b).

### (b) Civically Responsible and Educative Design

Designs like the SNFCC and Greener Grangetown do not manifest values in silos, of course. For when we are in the presence and aware of such Designs that put us in touch with central values, we in turn become mindful of civic responsibility, which, in turn, can play an educative role. After all, much of our education comes from being in the presence of exemplars that we find imitably admirable (Zagzebski 2017), or delightful for their beauty (Paris 2022a), and naturally, perhaps sub-personally, develop an inclination to live up to the values that they embody.

This kind of civically responsible and educative Design beauty can be seen clearly in the Wales Millennium Centre (WMC), a building otherwise hardly visually attractive: an imposing block of steel that towers over those approaching, with a massive bilingual inscription "Creu Gwir fel Gwydr o Ffwrnais Awen[28] | In These Stones Horizons Sing". Yet behind the letters of its massive façade is glass–reflecting light during the day, glowing at night; and, underneath the steel structure, a row of glass doors encourages potential visitors.

This monumental building boldly announces the values that its architect, Jonathan Adams, sought to embody in it, and does so not just symbolically, but quite literally: "the exterior of the building, 4,500 tonnes of structural steel was clad in 2,000 tonnes of recycled Welsh slate, reclaimed from waste spoils"; the inscription was composed by Gwyneth Lewis, former national poet of Wales and carved in "large Celtic lettering … represent[ing] the ancient tradition of stone carving but also the artistic excellence, values and integrity found inside the building, reflected to the world by the glass used within each letter" (WMC website). But what's the building for?

Like the SNFCC, the WMC is home to the Welsh National Opera. On the inside, the theatre that hosts the company's performances, testifies, through its Design, to the care taken to house one of the UK's best opera companies, enabling it to affect audiences. It thereby testifies also to the value placed upon it. This is evinced not only through its large capacity, but also in the way it's been

studiously calculated to enhance voice rather than orchestra, comprising 44,000 acoustic bricks that ensure soundproofing, reduce reverberation, and absorb sound, as well as holes in each individual auditorium seat, to ensure excellent acoustics throughout.

Though–like the working-class roots of the Welsh National Opera itself–it may not be immediately apparent, and may require some research to establish, unifying values that are recognisably central to Welsh identity and its working-class, industrial roots, with the arts, is a powerful statement about the value placed on the latter. In this way, the WMC stands as a monument to Welsh culture and one of its greatest modern contributions to the British arts: the Welsh National Opera. In doing so, it announces these values to the many visitors and passersby, who, if only briefly, will become mindful of them, something that only a handful of modern buildings can claim to do.

### (c) Compassion, Respect, Inclusivity; Or, Care-full Design

What lesson can we draw from the above? Let's try to arrive at it through a final everyday example. It's well known that ergonomics revolutionised Design and brought in new standards for its beauty. I am currently writing from a sit-stand desk, sat upon an ergonomic chair, which combination is working great for my back pain. I can only imagine how others, whose needs are perhaps harder to meet currently, feel when they encounter Designs that meet their needs.

But let me not lose sight of what we're after in this subsection: the common denominator behind the examples of beautiful Design we've examined is, I suggest, that they're all brimming with *care*.[29] This is unsurprising given the ethical nature of Design. But it's also unsurprising if Forsey (2013; 2025) and Parsons (2015) are right about the nature of Design more generally, and Gal & Ventura (2024: 259-264) about its ethical basis in care more specifically. For if these philosophers are right, Design is to be appreciated from a user-end perspective. So when it facilitates and enhances usage, and when the relevant usage can be counted as ethically good, broadly speaking, then the trait that becomes most salient if we think in terms of the manifested Designer is genuine care: not the kind of care that we get in craft, the care in crafting, shaping, moulding the object into its final state; but the care that comes from being compassionate, respectful, and thoughtful about what would be good for different users of your Design. In slogan terms, beautiful Design is *care-full* Design.

## 6. Amoral Design: An Objection

The view that beautiful Design, and Design more generally, is ethical in nature flies in the face of much Design that is evidently amoral. Consider the muffin pouffe designed by Matteo Bianchi. There's nothing remotely morally salient about it. Hence, while some beauty in Design might have the ethical component discussed, not all of it does.

In response, we should begin by distinguishing between the ethical and the moral. Morality is concerned particularly with other-regarding attitudes and behaviours. In this sense of the moral, virtually no Design can be classified as moral. The ethical, however, is broader and, though it contains the moral, comprises more generally concern for the good or wellbeing of human beings in general. It's in this sense that I claim Design to be ethical in nature.

Now, under this construal of the ethical, plus the plausible assumption that exercising our distinctively human capacities in ways that are not harmful to others is good (a view going back at least to Plato and Aristotle), we can see how the muffin pouffe can be said to offer certain ethically salient affordances: for, like the gluggle jug, it embodies a visual metaphor, inviting us to engage in imaginative play with the potential to enhance our capacities for creativity and enrich imaginative, visual, and, ultimately, conceptual links and associations (cf. Gal 2022). Even here, then, we find care–for the user's creativity, sensibilities, capacities, and enjoyment–embodied in the object's Design.

This way of seeing the ethical nature of beautiful Design allows us to see a point that is true of beauty more generally: namely that even while sometimes it may appear that beauty does not stem from any link to (other) functions or values, this is often a superficial appearance. For further

probing reveals that, on some level, there may still be some beauty there owing to functional considerations–and hence that should properly be thought of in ethical terms.

## Conclusion

I argued that beautiful Design comprises an ineliminable ethical dimension. Having shown that prominent accounts of Design aesthetics, and ethical, normative accounts of Design fail to truly appreciate its hybrid nature and to incorporate both formal and functional considerations into an account of its appreciation, I suggested that a version of functional beauty–axiological functional beauty–which is sensitive to the affective import of functions' non-aesthetic value, is better suited to the multifaceted nature of Design, its inextricability from ethical considerations, and the fluidity of both its functional and formal components.

The account offered here can, I think, be applied, *mutatis mutandis*, to other domains guided by human intention–ones that fall under the broad aspect of design, to the extent that these, too, comprise functionally-informed form. Perhaps by applying them thus we will come to understand the insight expressed by designers like Renzo Piano, and beautifully put by W.E.B. Du Bois, who sought "with Beauty and for Beauty to set the world right" (1926). The question is: what kind of beauty? I hope my paper is part of the answer.[30]

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## Notes

[1] Recently 'natural design' has also entered our conceptual repertoire, since natural processes like natural or sexual selection, albeit not guided by intention, are nonetheless guided by intelligible principles of which some are, arguably, teleological.

[2] Interestingly, some Design theorists whose outlook is ethical, encourage us to conceive of Design broadly (cf. Papanek 1971; Petroski: 2006).

[3] I'm not making any strong ontological claims here, nor any assumptions as to how functions are specified, etc., though I say more to say on this latter issue below in §4.2.

[4] By contrast to purely theoretical, expressive, symbolic, etc., though, as we'll see below (§4.2.2), this is only true with respect to some, albeit central, functions of design.

[5] Though Parsons' conception of "surface" is somewhat unusual in that he understands it as an object's usability (2015: 23), or how it performs its functions from a user's perspective. In this respect his view is amenable to the account I offer below. In general, however, Parsons focuses too narrowly on visual appearances.

[6] Though rarely expressed clearly or explicitly, save by Zangwill (2000).

[7] This is related to what Parsons and Carlson (2008: 45-49) call the 'translation problem'.

[8] Also most explicitly adopted by Zangwill (2000).

[9] Parsons and Carlson (2008: 49-57) call this the 'indeterminacy of function' problem.

[10] This narrowing is also, I submit, the sorts of the worries identified in §1.2. This becomes clearer if we remind ourselves of the historical reflections with which I opened this essay.

[11] Though, I suspect, a craftsperson or builder might well beg to differ, and I would humbly defer to their judgement.

[12] See also note 22 below.

[13] Incidentally, the University, I am told, is seeking its removal.

[14] Parsons (2015: 81) draws an interesting contrast between Design that is mendacious and thus manipulative, and Design that is playful and, though inviting us to fantasise, does not lead us into delusions by way of getting something out of us. Cf. §4.2.2 below.

[15] Gal & Ventura (2024) contains excellent discussions of these aspects of Design. The discussion below echoes some key concerns among Modernist theorists with Design's excessive focused on visual appearance. See Loos (2019) and the discussion in Parsons (2015: chapter 3).

[16] Such instant recognisability may seem to be undercut by the many imitations available, but I doubt that this is so–the owner's knowledge that their bag is genuine is itself a source of self–congratulation. *They* know, those who need to know know, and that's enough. This means that such imitability may itself be part of the Design, and serve to reinforce such self–assurance.

[17] Cf. Gal & Ventura (2024: chapter 1), who distinguish between descriptive and normative definitions of Design.

[18] Though that seems unlikely. After all, Forsey opens her essay by announcing that "[b]eauty is the original focus of philosophical aesthetics, and has a complicated history, as being connected from as far back as Plato with both truth and moral goodness". What's more likely, then, is that what's absent is a theory of beauty that contemporary philosophers find palatable.

[19] For more on this distinction, see (Paris 2024b).

[20] These, in turn, address the problems that contemporary accounts of the aesthetics of Design face; see §2.3-2.4, above.

[21] Remember that I'm taking 'form' to comprise an object's set of elements and their interrelations, provided these can be directly apprehended (cf. Paris 2024a), so I'm not confining beauty to the distally perceptible.

[22] This link to value is further illustrated by an experiential shift among people's attitudes towards oximeters, when these devices became household items during the Covid-19 pandemic. Initially seen as wonderfully helpful, many people begun seeing oximeters as racist Designs that made them deeply uncomfortable, when it was revealed that the way they work makes them unsuitable for accurately measuring the blood oxygen concentration of black people (cf. Gal & Ventura 2024: 162-164).

[23] At least given the resources and technologies available at the time.

[24] Compare the debate over the renovation of the Royal Ontario Museum discussed by Parsons (2015: 86).

[25] Perhaps the gluggle jug can be criticised as kitsch, though I don't think I agree with this charge, partly because of its self-conscious playfulness and unpretentiousness, as well as the functional aspects discussed in this paragraph.

[26] On the difficulty of sharply distinguishing between form and function, see Gal & Ventura (2024: ch. 2).

[27] Which also has aspects of what I've labelled manipulative Design, having restricted compatibility and luring users to constantly renew their devices and purchase more products (Gal & Ventura 2024: 150).

[28] "Creating truth like glass from inspiration's furnace".

[29] For a brilliant study of care in aesthetics, see Saito 2022.

[30] I'm grateful to Michalle Gal for inviting and encouraging me to write this article on this exciting topic and for invaluable feedback on previous drafts. Thanks also to the Cardiff Civic Society for sharing their knowledge of local Design, and to Sofia Lazaridi for helpful suggestions.

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# Design Science and Aesthetics

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**Abstract:** Design science advocates focus on two possible roles for aesthetics: in evaluation of design products, or in normative claims as inform and direct the design process and choices designers make. On a general model of design success criteria, aesthetics may be one among several factors for success, others typically including cost, utility, and ease of use. This view is typical to industry and overall design practice. But such engagement with the aesthetic may be purely stipulative and frequently dispensed with, particularly when cost considerations drive out 'inessential' expenses. I propose that aesthetic values inevitably characterize design norms, as well as our success criteria of designed objects. Choosing to ignore such values does not lead to design that successfully avoids or eliminates aesthetic features. Indeed, the technical norms of design science indicate at least 'minimal' aesthetic values, which are smuggled in even on a most utilitarian construal of design science.

*Keywords:* Design science, aesthetic value, values conflict, design norms, design success criteria

### Introduction and problem statement

Since the 1950s, proponents of a "science of design" have identified a range of formal or systematic methods they take to be common among—and even definitive of—design disciplines, which methods may resemble those of the empirical sciences but at all events engage principled, analytic, computational, and other aspects of formal sciences.[1] However, if design is a science or, more modestly, features pertinent qualities of a scientific pursuit, where would we locate aesthetics? Traditions of design science advocacy focus on two possible roles for aesthetics: (a) in the evaluation of design products, or (b) in normative claims as inform and direct the design process and choices designers make. On a general model of design success criteria—offered, for example, by Ilkka Niiniluoto (1997, 2014)—aesthetics may be one among several factors for success, others typically including cost, utility, and ease of use. Indeed, this view is typical to industry and overall design practice. But such engagement with the aesthetic may be purely stipulative and frequently dispensed with, particularly when cost considerations drive out 'inessential' expenses.

The question remains as to whether and how we may justify appealing to aesthetic criteria in more than *pro tanto* fashion. I propose that aesthetic values inevitably characterize design norms, as well as our success criteria of designed objects. My proposal rests on the notion that failure to consider aesthetic values in design pursuits itself reflects aesthetic values. Choosing to ignore such values, in short, does not lead to design that successfully avoids or eliminates aesthetic features. Accordingly, there are no technical norms of design science that don't indicate at least 'minimal' aesthetic values, on the order of "such-and-so aesthetic outcomes (from not minding the appropriate values) will suffice". In this manner, aesthetic values are smuggled into design science even on its most utilitarian construal.

To motivate and frame this "smuggling" account, I start with a brief overview of the science(s) of design, and introduce the picture of design science as a normative domain of inquiry (Niiniluoto).

Next, I present the challenge of negotiating values in design science, and review possible solutions to design *value conflict* (van de Poel, 2015; Kozlovski, 2022). Those solutions, however, do not point to the inevitability of aesthetic values as *prima facie* central considerations in design science; to that end, I offer my smuggling account. Wherever designers are solving problems for functionality and utility, we will find, first and indispensably, aesthetic sensibility *is* a consideration in at least some attenuated form.

## What a science of design is, and why we need it

The notion of a science of design, or design science, is somewhat controversial and, across the diverse design literatures, a bit inchoate—ranging over such (sometimes) occult domains as 'design thinking'. Nevertheless, we can broadly characterize a science of design as comprising modes of design research modeled on scientific methodologies—including though not limited to those of the formal sciences—as lend systematicity and rationality to such research. This is not to say that design science consists in the sciences upon which it relies: design draws on engineering as well as basic natural and formal sciences, including physics, chemistry, and computer science. These are none of them design pursuits, nor is design science an amalgam of parts of their theories, models, explanatory frameworks, etc. Rather, there are at least these three possible modalities to a science of design:

> 1. A formal science of design objects, their components, and interactions. In part, we can think of this as an applied mereo-topology, an exploration of the possible shapes, spaces, and parts of design rudiments and their combinations. Other formal scientific aspects of design—advanced by developments in digital technologies—include *data and representational design*, encompassing problems of storing, relating, mining, and displaying design information; and *optimization studies*, that is, modeling design objects in virtual space and assessing their systemic and interactive features.[2]

> 2. A social and behavioral science of design, as concerns creation and experience or use of design objects. Such studies range over questions concerning the perceptions, affects, behaviors, and preferences of individuals; group norms, processes, and dynamics; and cultural values and expectations.[3]

> 3. A cognitive science of design, including studies focused on *reception*, especially special perception studies, such as of space or form; and *creation*, especially design cognition.[4]

On a broader view still, we can extend the list to include *social* sciences of design and environmental science as focused on the designed environment: environmental psychology; energy consumption; light, sound, and airflow studies; acoustics; and so forth. The objects and methods of scientific design research are as diverse as the attendant research domains and their objects, as may include designed artifacts, their parts and features; their materials and environmental forces or conditions; designers, producers, and users of designed artifacts; systems, processes, behaviors; and social and economic dynamics. The methods, correspondingly, range over such classic features of scientific method as observation and experiment; statistical analysis; random assignment to treatment and control groups; case studies; field- and laboratory work; a full complement of abductive, deductive, and inductive reasoning; hypothesis formation, prediction, and confirmation; reproducibility and testability of results; and simulation and modelling.

Indeed, long-standing pursuit of model building and simulation lab testing as methods-for-design closely track the scientific method. It may even be thought that what lends a fundamental design core to design science—beyond a collection of scientific facts, theories, or elements of a research program that happen to be about design—is the autonomous, self-standing design model. The idea is that the kinds of models by which we understand the nature, behavior, and consequences of specific design objects are not accounted for in their entirety by any other, more general (e.g., broadly physical or mechanical) models.[5] Design models in their classic forms are material, pared-down, and often miniature prototypes of all manner of artifacts, from contraptions to clothing; the modern design model is a *virtual* realization of the artifact. Graphic representation may be optional, depending on

the artifactual kind. What joins the classic and modern forms is, at a minimum, the concept of models as a means of developing synthetic accounts of diverse phenomena and behaviors associated with design objects. On this picture, models allow designers to capture the normative, make predictions, generate explanations, and articulate the range of potential states and transformations of the objects and their structures.[6] All this, in line with the received philosophy of science picture of scientific models and their use; note that such use is commonplace in contemporary design.[7]

As it turns out, though, the history of design science concepts predates the passion for modeling in philosophy of science and starts, instead, with Herb Simon's account (1969) of *problem-solving* as representing a significant parallel between the domains and goals of design and the sciences. Simon accordingly promotes formalization, empirical research, and analytic decomposition as tools and means of an optimizing, value-neutral design science.[8] This parallel is not without its critics. For example, we might protest that while design aims at *creation*, science aims at *discovery*—or that the former draws on a historical catalogue in ways irrelevant to the latter. Yet such complaints cannot be registered consistently: For one, the natural sciences are vigorous in pursuit of creation (molecules, particles, elements, etc.), whereas designers, at least for the Platonists among them, may be said to discover new forms. Similarly, the sciences comprise historical enterprises, and design may be conceived of ahistorically (again, as suits the Platonist). And even accepting that design studies may be fruitfully formalized, the dedicated critic may worry how a value-neutral design science will capture aesthetic *qualities* as manifest in design; or how aesthetic *value* may be characteristic of, or judged in, designed artifacts. I return to this set of worries below.

### Normative claims in design science: Niiniluoto's proposal

First, however, note that something like the creation/discovery distinction is embraced by Simon, who proposes that the core claims of design science are causal claims about producing sought-after ends through suitable means. In short, they are about creation (rather than discovery). Niiniluoto (1997, 2014) follows Simon in this vein, and points out that, for centering on causal claims that aim at solutions to practical challenges, design science is a *normative* science. And, following von Wright (1963), Niiniluoto characterizes such means-end analyses as taking the form of what he calls 'technical norms' or 'conditional recommendations'. Consider, for example, the needs to serve and to carry hot coffee, and the situation that we may be moving from place to place as we serve or carry the coffee. Here the normative design solution is to create the disposable coffee cup. Such norms are roughly of the form:

TN1  Wants/needs $x$ + situation $y$ → should $z$

which we may render in natural language as

TN1a  Given a particular set of wants or needs $x$ and situation $y$, the (rational) design solution will be to do or create $z$.

The difference here with core claims of the so-called standard sciences, as Niiniluoto would have it, is that the standard sciences are descriptive or predictive, and explicitly, at least, non-normative. Even someone who is a materials engineer by day and sociologist of food by night will not tell us that we *should* devise the disposable coffee cup, or what designs for such *should* be executed. That is fair ground for the designer, by contrast.

As Niiniluoto sees it, the challenge of the normative science of design is to wrestle with the value-ladenness of technical norms. He is a little vague about where exactly the values seep into the norms. I suggest they are everywhere. Thus, when we state our want or needs, those often reflect our values.[9] This seems to be Niiniluoto's clearest concern—as he puts it, "any social value could take the place of the value [$x$] of a technical norm" (14). To revisit the disposable coffee cup example, our needs to serve and to carry hot coffee[10] are deeply infused with all manner of social values concerning coffee

consumption (and many *other* values, as well, including aesthetic values relative to taste). The consolation Niiniluoto offers is to suggest that the values so embedded in the first clause of the antecedent don't commit us to such claims of design science—or the underlying theories or models—those values merely set up the conditional.

I'm not sure this is sufficient to grapple with the depth of value-ladenness in technical norms of design science. For his part, Niiniluoto worries that the decision to fixing (securing) the situation $y$ and producing solution $z$ to accommodate (rather than swap out) $y$, is an additional entry point for introducing values. So, for example, given that

(x) we need to transport ourselves around the urban environment; and
(y) the city (and the world) is polluted by low-capacity automotive combustion engines;
then
(z) our solution is to devise electrical cars.

This places a premium on the low-capacity automotive solution that is perhaps better met by mass transit to begin with. That assessment is fair enough, but the larger issue is that we may also bring our values to how the situation is described, that is, what we take to be the problem space, circumstantially, for which the design poses a solution. After all, circumstantially, that we have organized ourselves into cities with separate districts for work and life, or with non-optimized infrastructure for distribution of goods and services, may reflect our high valuation for organic urban development; or, perhaps, our low valuation for urban planning and design; or some other valuation still. And, the consequent of design-wise technical norms is *also* value-laden and not in a hidden way: *whatever* our wants, needs, or circumstances, the conditional recommendation that we *should* pursue the design solution described in $z$ may require (perhaps always requires) not just establishing that $z$ satisfactorily addresses (wants, needs, or circumstances) $x$ and $y$, but that there is some value in so doing, be it intrinsic to solving the design issue or extrinsically driven by other values we wish to promote. Not every design problem merits addressing, in short, and each normative drive described in such conditional recommendations needs to rated, that is, *evaluated*, to see that we really should be pursuing $z$, after all.

### Where to fit aesthetics? Niiniluoto again, and van de Poel's optimization problem

Taking design science as a normative science along roughly the lines that Simon and Niiniluoto propose, I have suggested that we run into value-ladenness at each turn, for any (normative) causal claims of the science. This by itself does not pose any worries; Niiniluoto is happy to suggest that we need merely decide what matters to us and then proceed with the science. And perhaps this could work out well in a world narrowly limited in value-kinds. Niiniluoto's concern focuses on ethical value and if we could gauge good, bad, and neutral, for example, this might be sufficient to the task of fully characterizing and judging the normative claims of design science. That is not the world we live in, though. In fact, a 'Value Sensitive Design' approach has emerged in the design disciplines, which approach mandates attention of designers to a wide range of political, social, and humanitarian values, as well as standard or more generic ethical values.[11] And, as is central to many, if not all, designers' concerns, we might well suppose that *aesthetic* value should feature prominently in the value-ladenness of design science's normative claims.

But *where*, and *how* do aesthetic values feature? In an earlier essay, Niiniluoto (1997) outlines design success criteria where aesthetics may be one among several factors, others typically including cost, utility, and ease of use. As go the technical norms he later outlines, these criteria seem to mark the consequent of those norms as value-laden, if not in initial statement of the causal claim, at least as subject to multi-factor evaluative criteria at the adoption stage. So here we get the suggestion, as seen across the design literature (e.g., Pye 2007, Herriott 2021) and as sounds fairly mundane, that we *can* take (it's *possible* to take) aesthetic value into consideration when judging design. This is

incontestable, I think, but it is equally insignificant. Aesthetic value doesn't *have* to be a factor in our design success criteria, by Niiniluoto's lights; we might stipulate such but we can just as easily and frequently dispense with it. And—as designed objects will *always* have costs of production, marketing, and after-market use—attending to aesthetic value, on standard manufacturer's reasoning, may be desirable but will not be sustained if the costs of doing so grow too high. On Niiniluoto's picture, costs pursuant to aesthetic value are avoidable and can be driven out as 'inessential' expenses. In this corner of design science—evaluation of the proposed solution for adoption—engagement with the aesthetic is compelling as criterial unless overridden. And yet, as we are talking about design, after all, might we hope to justify our appeal to aesthetic criteria in more than *pro tanto* fashion?

To be sure, there *is* something to Niiniluoto's laundry list approach to design success criteria, where the aesthetic is just one among several plausible but not essential measures. For one, seeking to *balance* or manage different sorts of values is a common issue in the design science literature (even as design *theory* typically and unreservedly embraces aesthetic value[12]). For another, design is sufficiently diverse an enterprise that one may well want to exhibit maximum flexibility in determining which measures and values are important relative to a given design problem. And for a third, values discussions in design science or design scholarship all told tend to focus on raising *ethical* values—perhaps assuming inclusion of aesthetic values, though perhaps not. But the central consequence of a laundry list approach here is to highlight that, in such considerations of differing sorts of values as mark design science, we will quickly need a way to adjudicate *conflicts* among values. How tractable are such conflicts, and where will aesthetic value land among conflicting values? One helpful guide to value conflict is provided by some recent work of van de Poel (2015 and, with Royakkers, 2011/2023).

To lend some precision to value conflicts, let's follow Van de Poel and colleagues' characterization of such as those situations where (a) we make a choice as guided by two or more different and relevant values, (b) the differing values differ as well in the options they guide us toward, and (c) there is no single value that defeats all others. As Van de Poel points out, this is something of a generalization on Williams' characterization (1965/1973) of moral dilemmas (as situations where our obligations are in conflict and cannot be fully resolved), albeit without the normative emphasis on actions to be undertaken given the choices toward which we are guided. The good news is that, in many design choices, our values all lean in the same direction; or, where they don't lean toward the same choice, we weight the differing values in such ways that they clearly guide us to a single design solution—or similar enough options. The beautiful or elegant design solution may be the inexpensive and ecologically-friendly solution, as with disposable clay coffee cups. In short, there are plenty of design science cases where there is no real value conflict.

The bad news, as Van de Poel has it, is that much of the time this is not the situation that designers, or design consumers (all of us) find ourselves in. Rather, value conflicts abound and, in his picture of things, following Franssen (2005) who is writing relative to *engineering*, the appropriate framework for thinking about value conflicts in design is Arrow's social choice theorem. As a reminder, Arrow's theorem offers us the grim picture of social choice that there is no generalizable procedure for arriving at collective decisions as are based on individual preference-driven decisions, where we aren't violating one of six must-keep conditions, such as no ultimate decider, monotonicity (continuity of modified preference ranking at the social level), independence of irrelevant alternatives, etc. What exactly this entails for social choice theory is subject to debate, though notably many (including Arrow) take this as not entirely promising for picking among electoral schemes. Translating into the domain of value conflict, Van de Poel points out that we can swap values in for individual choice-makers in ordering choice options and thereby model the choice phenomena as undertaken by a single designer (the simplest case). Thus, consider a bridge designer who chooses, relative to cost savings to taxpayers (less expensive materials) and lowering risk to bridge users (more expensive materials), among three scenarios: low cost/high risk, high cost/low risk, and mid-level cost/mid-level risk. Our designer triggers an Arrovian condition if, for example, the values they

attach to each scenario defeat each other in a circle (in the manner of Condorcet's voting paradox). In this fashion, the range of standard ways of choosing among values may fall prey to Arrow's theorem. But it need not, as Van de Poel points out, though for those approaches that do not—e.g., cost-benefit analysis, trade-off strategies, or maximin strategies—other problems may arise, from commensurability of value measures, to measurability of ratios needed to calculate considered choice of values.

In sum, Van de Poel proposes, different approaches to addressing value conflict bring distinctive benefits and drawbacks, and combining approaches may be a way to optimize for the challenge of which values win out. While Van de Poel's particular focus is on moral values, he takes his meta-approach to be applicable to value conflicts with non-moral values, and in this regard his conclusion merits paraphrase relative to aesthetic value: "...the designer may not always be required to do what is [aesthetically] best, as it may be good enough to choose an option that is [aesthetically] acceptable but perhaps not [aesthetically] best." (115). Broadly, then, he is pursuing a sort of satisficing strategy and, it's fair to say about actual design practice, that probably captures much of how design value conflict and tension are approached.

Still, his strategy doesn't resolve issues attendant to commensurability, measurability, or Arrow's theorem-type issues, and as the possibility of conflict remains non-zero, it's entirely conceivable for aesthetic value to be left behind or left out altogether. A more recent try at addressing such value conflict in engineering and design (Kozlovski 2022) borrows on Ruth Chang's notion (2009, 2013) that we can, by drawing on our 'normative powers', commit ourselves to new driving values that are deciders and so resolve any value conflicts. But, and while this may represent a successful *ad hoc* strategy to value conflict resolution, it still provides no guarantee of minding aesthetic value in design problem solving or whatever counts as design science method.

The problem, which manifests as "no guarantee of aesthetic values," is a failure to take aesthetic values as foundational in design science. And if the warrant for minding those values is not there *prima facie* and fixedly, then we need some way to make sure that, contrary to at least the Niiniluoto picture of things, aesthetic values are embedded and enjoy preeminent standing. We need, in short, an account to explain how aesthetic values are smuggled in with the territory of design science.

In a fashion, this is one way we might try to read a standard functionalist approach (cf. e.g., Carroll, 1999; also Koller, 2021), the notion that accomplishment-appreciation judgments count as aesthetic judgments because they are centered on elegance of design. We might think that accomplishment value smuggles aesthetic value into design science under the guise of the indispensable task of gauging utility. If a designed object is functionally valuable, it is such that users will derive accomplishment value from its use. A similar sort of 'fashioning' might also be applied to a more canonical Functional Beauty concept, per Parsons and Carlson (2008), i.e., that designers or users actually or normatively take beauty of designed objects to be gauged against function.

But in both cases, per standard criticism (cf. e.g. Davies, 2010), the aesthetic value as intended, or as perceived and appreciated, can be separated out from functional or utility intentions, realization, and reception, as each manifest among designers or users. It's not clear that falling under a given functional type (car, coffee cup, etc.) requires actual functionality, which as Houkes notes, may be elusive anyway. So, what designers and users are gauging in Functional Beauty is beauty against a design that may not be functional, which means that we can't possibly *require* functional awareness for gauging design's aesthetic value. In short, design-for-function-in-principle is not the same as design-for-function; rather, it is design for an aesthetically rewarding object that may or may not be useful in ways we recognize. We can get, for example, a pretty good idea of a coffee cup's broad aesthetic value even if the cup is malformed or otherwise unusable. Hence the problem remains, for those taking aesthetics as foundational values of design, to assure its motivating or grounding designer's intent and problem solving in a design science.

To review, Niiniluoto's laundry list approach to values that feed into our criteria for judging design has it that *all* core values as include aesthetic values *may* factor into those criteria. By parity of reasoning, aesthetic values *may* factor into technical norms of design science. Or not. So, not only does Niiniluoto not give a weighing mechanism to adjudicate among values in tension or conflict, we see that aesthetic values are good to have but not indispensable—and, in any case, possibly overridden by other values. The literature on addressing values conflict in design and adjacent domains isn't confidence-building, given the formal challenges of Arrow's theorem and such practical difficulties as incommensurate values or escape clauses like the Chang proposal that we 'choose-our-own-commitment' to settle value conflict. In short, there are no guarantors of aesthetic value in design science from that corner, nor does it seem that we can smuggle aesthetic value into design science by hitching such value to functionality or utility in design, as such values are easily enough detached as they are hitched.

## Smuggling solutions

If this seems troubling, that may be a prompt to simply build aesthetic value right into the heart of design science—we might just assume that it's been there, and will remain there, all along. Along these lines, consider:

SMUGGLING HYPOTHESIS, GENERAL VERSION
Design just *is* artifact-oriented problem-solving as imbued with aesthetic value—whether high or low value but nonzero value in any case.

The basic notion is to reject the view, which I have associated with Niiniluoto (and some might add Simon), that design just is artifact-oriented problem-solving, where aesthetic value is *optional*. It's not clear how it could be optional, truly, because even a decision to ignore aesthetic qualities as, for example, driven by economic cost considerations is a decision that leaves the resulting object with aesthetic qualities. They may be banal, bland, nondescript, uninspiring, prosaic, hackneyed, subtle to the point of trifling, and so on. And yet those *are* aesthetic qualities.[13] If we buy this hypothesis, I suggest we also get for free this evaluative corollary:

SMUGGLING HYPOTHESIS, EVALUATIVE COROLLARY
Judging design (*ineluctably*) includes gauging aesthetic value.

We get this one along with the first, on the trivial grounds that the central value(s) of design are the ones we will (that is, *should*) put at the center of our evaluative judgments. But now we can easily plug this into a version of the hypothesis that directly addresses Niiniluoto's criterial scheme:

SMUGGLING HYPOTHESIS, CRITERIAL VERSION
Judging design (*ineluctably*) includes gauging aesthetic value; hence judging designed objects entails judging them relative to their aesthetic qualities—and possibly other qualities (functionality, cost, etc.).

This gets us part of the way, underlining that design is always characterized by aesthetic values, such that the way we judge designed objects has to focus on their aesthetic values. Fair enough—but how do we tackle the Arrow's theorem-type challenge that van der Poel identifies? How, in a conflict among values—which we can now say will always include aesthetic values, because designed objects always have such values—(how) do we decide which values to weigh *more*, in either creating or appreciating such objects? And yet more pertinently for advocates of the SMUGGLING HYPOTHESIS, how do we arrange that aesthetic values, central as they are to design as enterprise or science, are the deciding values in any such conflict or tension?

This is the easiest, if most controversial piece of all. We need merely stipulate, in the framework of an Arrow's theorem framing of the issue, that there is in fact a "dictator", that is, a universally deciding value, and it's *aesthetic* value. The theorem, or rather, van de Poel and Frassen's variation

thereupon, is satisfied, though it does require landing on one of the several Arrow theorem-wise non-desiderata. But in this sort of case, that turns out to be a *good* thing because, in the world of value conflicts, if you have a value in a domain that is *the* central, indispensable, motivating value all told for the domain, that *should be* the authoritative value.

The rest of the exercise in locating aesthetic value at the center of design science follows more or less automatically. Take the case of Niiniluoto-style technical norms, which we render accordingly as

> SMUGGLING HYPOTHESIS, TECHNICAL NORMS VERSION
> Design just is artifact-oriented problem-solving as imbued with aesthetic value, so
> where our wants/needs are $x$, characterized by aesthetic desiderata $ad_x$; and
> we have situation $y$ characterized by aesthetic features (constraints, opportunities, etc.) $as_y$;
> →
> we should do or create $z$ with fitting aesthetic values $av_z$.

Let's revisit the disposable coffee cup once again, as example. This particular need or desire to carry one's personal coffee around different places or with friends or colleagues, as it happens, has abundant pleasures attached to aesthetic features of (i) the substance to be contained, itself (the coffee); and (ii) the sorts of personal experiences and interactions as accompanied by coffee drinking. Here is a very rich well from which to draw on the aesthetics of the everyday. The situational context, which defines the particularity of the designer's challenge, is that we take the coffee in motion, which occasions our engagement—proprioceptively, or through internal imagery or feelings, or otherwise—with the aesthetic features of our individual walks through the world, wherever we take ourselves and have opportunity to seek pause or concentration or any other mental or social states enhanced by drinking coffee. Now, a range of aesthetically-robust or aesthetically-lean solutions (see Figure 1) will meet the antecedent to complete the conditional recommendation.



*Anthora* disposable coffee cup
Leslie Buck (1963)
Photo: Andy Levine (2024)

*I (HEART) NY*
disposable coffee cup
Milton Glaser (1975)

Unadorned disposable coffee cup

**Figure 1.** Aesthetically robust and lean design solutions.

Each of them, however, including the very most basic design, brings its formal properties, its suitability as affordance, and its comfort of use, as are all the source of users' aesthetic experiences of the coffee as well as of the cup. As it happens, the cup example works particularly well given the deeply aesthetically evocative character of coffee. Yet we can also point to users' aesthetic experiences of, and with, machine tools, medical equipment, electrical circuitry, and myriad other more mundane objects of design.

Finally, I mention in passing a version that will play out in model building for design, too:

SMUGGLING HYPOTHESIS, MODEL VERSION
Design just is artifact-oriented problem-solving, through model-building, as imbued with aesthetic value; so any model we craft (of, e.g., object, process, etc.) needs to capture the relevant structure and phenomena, with their projected aesthetic value fully represented.

In short, once we take aesthetic values as central to the design domain, we can tell a multifaceted story about how such values as centrally positioned shape a science of design—as primary criterion by which we gauge value of a designed artifact; as indispensable information characterizing problem solving in the domain; and as projected features of models of designed objects (or processes, etc.).

## Justifying smuggling

By this point the reader may be asking what justifies *any* version of the SMUGGLING HYPOTHESIS. It may seem arbitrary and perhaps counterintuitive if arriving at design science via engineering or other functionality- or cost-centered pursuits. And yet, as we have seen, the hypothesis definitively addresses worries about slippage in the ranking of aesthetic value, in criteria for gauging design overall, in problem-solving norms on the creation side, and presumptively other aspects of design science. Of course, that still leaves the question as to why we don't want to just *allow* aesthetic value to slip down, if that should look like the right design decision.

To address that question, consider the proposal that the basic proposition, or charge, of design problems is to create an artifact that addresses the problem space. The base assumption of most design theorists or philosophers of design, reasonably enough, is that this proposition can be completed as "...with whatever functional features are necessary to solving the problem", and secondarily as "by the way, make it look good, too".

But this is the wrong emphasis, because design problems just *are* aesthetic problems. So the actual way the proposition should be completed is "...with whatever aesthetic features are necessary to solving the problem", and secondarily as "and of course, make it work, if you can". Scanning across the world of design, one finds plenty of evidence for this approach, where aesthetic problem solving was clearly frontloaded in front of functional problem solving, whether or not the designed object was an aesthetic or functional success.

I cannot take this approach as definitive or even most common, though; there are *also* many designers who would finish the proposition in the first way entertained here, frontloading functional concerns and treating aesthetic values secondarily at best. So, too, are many designed objects assessed by many of their users in primarily functional terms. This does not look to be normative on any view of design science as focused on aesthetic features of our artifactual world. But lots of designers, engineers, and users, follow a non-normative path in this regard, and they have every incentive to do so if (a) no one is asking for the normative path and (b) it's cheaper, in whatever dimensions, to do so. At all events this is not problematic to explain as puzzling deviance from the norm. For one, as noted, there are cases where, under the right circumstances, it's rational hence *not* puzzling; and for another, we can simply take those designers or users who fail, non-normatively, to put a premium on aesthetic features or values of their designed objects, as placing a *low* premium on aesthetic features, with corresponding aesthetic results.

And this brings us to the reason why it's normative for design science to focus first and foremost on aesthetic value, and—though this perhaps sounds strange—to worry about non-aesthetic functionality secondarily, despite Simon and others apparently urging to the contrary. The reason is that the problems that designers solve are at root aesthetic problems, no matter what other wants or needs designers are meeting, under whichever circumstances or descriptions, with whatever functional achievements to which they or we aspire. For, on any of the going conceptions of aesthetic value—hedonic, collaborative, social, achievement-oriented, and so on—such value is built (well or poorly) into solutions to design problems. Correspondingly, the way we set up the problems (e.g., tracking

technical norms) may reflect keen attention to or outward neglect of aesthetic value but in any case, will reflect an attitude toward what is aesthetically acceptable. Attempts to cut aesthetic value out of the solution space will simply generate aesthetic value by neglect—probably a recipe for the banal, or perhaps the comically bad. Terrible aesthetic features are, after all, still aesthetic features.

By contrast, those who want solutions to functionality challenges with no aesthetic commitments, no reflection on aesthetic values, and no prospect of yielding aesthetic features in the solutions, likely need to look outside of design—in whatever realm we can produce artifacts that have no aesthetic features or values, good, bad, or otherwise. I just don't know what realm that could be.

### Conclusion

I have argued that the place of aesthetic values in a science of design is at its core. This is in contrast to a traditional view that design science, as a problem-solving domain, (a) has the primary task of recommending courses of action to meet functional challenges, and so (b) should maximize utility even as doing so comes at the expense of aesthetic value. The primary questions about the corresponding place of aesthetic value in design science can thus be summed up as these: (1) if we don't think aesthetic value should possibly slip away all told here—if we don't think it's defeated by functional value or cost—how do we block that result; and (2) how, in the adjudication of conflicting values in in design science, can we assure that aesthetic value remains a motivating force in design creation and a central criterion in judging designed objects?

To address these questions, I have proposed, we need to see that the traditional view can't account for the presence of aesthetic features, however impoverished or ordinary, in all designed artifacts. The most banal elements of public infrastructure, like a highway entrance or a striped crosswalk, all have aesthetic features, though they may be less pronounced than those of other elements of the designed environment. And so, too, for yet more quotidian designed objects, including our pet example, the plainest disposable coffee cup. The designer who chooses to mute their aesthetic choices, on grounds of cost or function, has elected to foster muted aesthetic features. As such pervasive drawing on *some* form of aesthetic value plays out in the technical norms of a formalized design science, what we need—and our circumstances as give parameters for our need—are all aesthetically inflected. We don't merely need to carry coffee around in ways that are highly mobile—we could drink coffee out of a balloon if that was the most physically elegant way to do so. Rather, we are also seeking the tactile and visual pleasures that come with a cup shape and holding it. It is hardly surprising, then, that our design solutions—and the ways we judge those solutions—are also all aesthetically inflected.

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### Acknowledgments

# Notes

1 Competing views of design research reject, or lower expectations from, a science of design; cf. Cross (2001). It also merits mention that approaches to a science of design are varied and evolving; cf. Baskerville et. al. (2015).

2 Cf. e.g., Haakonsen et. al. (2023) and Papalambros and Wilde 2017).

3 Cf. e.g., Donovan and Gunn (2012), Murphy (2016), and Lupton (2018).

4 E.g., Goldschmidt (2014). On psychology of design more broadly, cf. Carbon (2019).

5 If this was talk of theories rather than models, we would likely speak of being 'subsumed under'; aside from the general move towards a semantic or model based-conception of theories in philosophy of science, there are no obvious candidates for architectural theories in the manner traditionally associated with scientific theories per the classic philosophy of science discussion—whereas the same does not apply to models.

6 Consider design phenomena **A** (which may or may not be *unique* to design) which are produced or endured by, or go into the creation of, design objects (which may or may not be *unique* to design). One way to grasp the nature of those **A**-phenomena is by crafting and exploiting a satisfactory model of the associated design objects, their behavior, relations, genesis, development, etc. The best models will have characteristically scientific features:

> a. We build the model by representing in abstract form the features of the system—that is, the set comprising the design object, the processes it undergoes, and the phenomena it endures. The key feature is the *structure* of the system, the collection of patterns and relations among the system's elements;
> b. We postulate how the system works based on the model, craft equations to characterize its behavior, and fashion simulations of behavior in the system;
> c. If the simulations yield accurate visualizations and projections of real-world behavior of the system, then the model may be validated; models are typically judged by their conformity with the observed data, predicted outcomes, simplicity (or other aesthetic properties), and utility (explanatory or otherwise).

In short, we have a formalized model of the real-world system (the complex of design object, processes, and phenomena), where assumptions replace real-world measurements and where, as a bonus, model-wise experiments serve as proxies for controlled, real-world experiments. In design, this model-wise conception entails two related scientific projects: understanding the structure of design systems for token design objects and, more broadly, for the overall universe of possible design objects, which may entail individual type-oriented models, as well. On the token level, it happens that such features are common in computer-facilitated virtual models in design. In such contemporary design modeling, designers draw on artificial languages to express data concerning *structures* (patterns and relations among the elements), along with a rule-governed *interpretation* (semantics) of the structures' elements. Even in pre-computer modeling, designers were able to use conventional models to express a wide range of information concerning the structure and provide interpretation allowing for translation into real-world artifacts of the built environment (albeit to a lesser degree of precision and with less predictive accuracy).

7 As made manifest by the model concept, there is no obvious 'superior' or greater-encompassing framework (a) that attaches to any other single scientific domain and (b) of which design models—either for individual, token objects or for the universe of objects—are a part. That is, design models apparently enjoy a degree of conceptual autonomy; they draw on other sciences (as well as non-scientific domains) yet 'belong to' no others—not to engineering, not to materials science, not to sociology, and so forth. This autonomy in turn suggests that, after all, there are design objects and phenomena that are uniquely so, partly on classic scientific realist grounds: an empirically-validated model entails the existence of the system whose structure it represents, and where no other model better represents that structure, the system and its elements are self-standing objects of a dedicated scientific domain.

Against this suggestion it may be argued that there are other domains, perhaps also in the arts—for example, sculpture—which by the same token could be thought to have an attendant science—however, about which we would think a dedicated science to be absurd. Indeed, we might well think the criterion for a science laid out here to be so loose as to admit a science of dust or cheese. What makes the design case count and not the sculpture case is the wealth and variety of unassailably scientific research we take to feed into the standard design model—but not any model of sculpture. What rules out the other, apparently trivial cases, is that they all represent particular elements of some other general class featuring more robust explanatory frameworks—models for the universe of possible systems—of a higher taxonomic order offering *minimally* significant explanatory power, where (by contrast) design domains are already at that minimal level of explanatory power.

[8] Simon, (1969/1981/1996); see also Huppatz (2015).

[9] Though, as a reviewer points out, our needs may also contradict our values.

[10] A reviewer notes that this peculiarly North American "need" may not be as pressing elsewhere; while that may be true relative to disposable coffee cups, the broad need to carry hot coffee orients all coffee cup design.

[11] Van den Hoven, et al. (2015) discuss such values to which design should be sensitive as comprise accountability and transparency, democracy, justice, well-being, inclusiveness, presence, privacy, regulation, responsibility, safety, sustainability, and trust.

[12] Thanks to a reviewer for this point.

[13] This perspective moves in very different direction than Hamilton's proposal (2011) as to why design always features aesthetic considerations, namely, because design just is *aesthetic* invention—as contrasts with *mere* invention such as yields aesthetically 'inert' products like the Citroën 2CV. On the Smuggling Hypothesis, design and invention (or, at least, Hamilton's *mere* invention) are collapsed and some (perhaps many or most) designs just are aesthetically quotidian or bad.

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# Design and Rationalism: A Visualist Critique of Instrumental Rationalism

MICHALLE GAL

**Abstract:** This article presents a visualist theory of design that contrasts with the instrumental rationalism that dominates the philosophy of design. My critique of rationalism is based on two omnipresent and paradigmatic phenomena in design: the variety of forms for one single function and the variety of uses of one form. Instrumental rationalism defines design as a coherent line that runs from a rational goal to the proper means and proper use of an object. Therefore, this philosophy values design according to its efficiency. However, the diverse aesthetic forms of design objects and the creative ways that users engage with them. do not follow the instrumental rational plan, but rather aesthetic motivations and design's visual affordance. I argue that the variety of forms of design objects and emergent uses are often more substantial than rationality in the constitution of design. Claiming that these encounters are innate to our essence and ontology as visual beings, I offer a visualist anti-rationalist theory of design and human nature.

*Keywords:* instrumental rationalism, form, affordance, emergent properties, Visualism

## Various Forms for a Single Function and Various Uses of Single Form

Two closely related phenomena provide useful insights for the analysis of the relationship between design and rationalism: the various forms for a single function and the different uses of a single form. For example, chairs, as devices for sitting upon, have many different forms (figure 1), but it is also the case that chairs have many uses that have nothing to do with sitting, for example as workout devices, as makeshift ladders, or as convenient places for putting clothes (figure 2). These phenomena, which reflect both the nature of design and our nature as human beings, merit attention through the lenses of the fields of design and philosophy, mainly ontology, and theories of human nature. Design offers valuable insights into human nature and ontology due to its presence in everyday life since ancient times. However, there is still much to learn about us from design works, similar to what has been done with artworks. A significant insight is related to recent criticisms of rationalism (Gilovich, Griffin, and Kahneman 2002, 19–48). This essay will show how analysis of design may be useful for this general critique and then will move to criticism of rationalist theories of design. The essay will then introduce a visualist philosophy of design, as an alternative to rationalist theories.

As Daniel Kahneman noted in *Thinking, Fast and Slow* (2013), uncovering heuristics and biases has led to a critique of rationalism that challenges the "dogmatic assumption, prevalent at the time, . . . that the human mind is rational and logical" and idea that "people are generally rational, and their thinking is normally sound" (Kahneman 2013, 8–9). This has been done by uncovering of heuristics, biases, and traces of "these errors to the design of the machinery of cognition" (8). Kahneman's project has been extremely influential in analyzing human nature. It is devoted to exposing the "ways human choices deviate from the rules of rationality" and points out the harm caused by rationalism's

"unfortunate tendency to treat problems in isolation…where decisions are shaped by inconsequential features of choice problems" (14). However, I think that rationality is not the founding element of our nature, from which we sometimes unfortunately deviate. Elaborating on externalist philosophy and the visual turn, I claim that we are primarily visual beings and our engagements with the world originate mainly in the visual sphere.

What may be called the rationalist illusion predominates in the philosophy of design, its practice and academic education, as will be presented shortly. Rationalist definitions of design assume that a linear, rational design process runs from the designer's rational mental plan of an object's function to the designed object to the user, who interprets the object in order to understand its proper function and use it properly. However, the full realm of design includes the visuality of the object after it has been produced, which opens space for many possible forms and for emergent properties created by the user's encounters with the object rather than by rational plans. In addition, the facts that there are many different possible forms for one function and many different uses for one form both support insights from the visual turn (e.g., (Ventrella 2015; Nyiri and Benedek 2019; Gal 2019; Berger 2022). These two facts support a transition to a more visual approach in philosophy, which I refer to as "Visualism" (Gal 2022, chapters 1,4,5; 2020). A visualist approach suggests that our being is primarily shaped by our visual experiences rather than by rational and conceptual mental content.

These two features of design—many forms for one function and many uses for one form—argue against rationalism both from the perspective of the designer's motivation and from the perspectives of users. I contend that the variety of forms that exist for one function supports the contention that design takes place in the aesthetic stratum of the design object rather than in the intentions of the designer (Gal and Ventura 2023, 30–31, 68–71). David Pye reminds us that "whenever humans design and make useful things they expend a good deal of unnecessary and easily avoidable work which contributes nothing to its usefulness" (Pye 1978, 13). Along this formalist line, Henry Petroski points to the diversity of each tool as the right starting point for understanding how it has evolved. In *The Evolution of Useful Things*, Petroski takes as his starting point the many shapes of eating utensils, claiming that "understanding the origins of diversity in pieces of silverware makes it easier to understand the diversity of everything from bottles, hammers, and paper clips to bridges, automobiles, and nuclear-power plants" (Petroski 1994, 3).



**Figure 1.** Variety of armchair: variety of form for one function.

The user is the protagonist of the second phenomenon—the emergent uses which one form may afford. My daughter's chair (the center of figure 2), has never been sat on. This is not an uncommon conduct! Take a moment to think about the many ways people engage with a chair: in addition to those mentioned above, chairs are used as shelves, tables, or exercise devices, but they are also used as metaphors or as status symbols. Seatablity, that is, a chair's function as a sitting tool, is not more substantial than these uses. It works the other way around as well—objects that were not meant to be used as chairs are used for sitting. For example, people often sit on fences even though they are not designed for sitting, they are not comfortable to sit on, and they are not efficient sitting tools (figure 3).
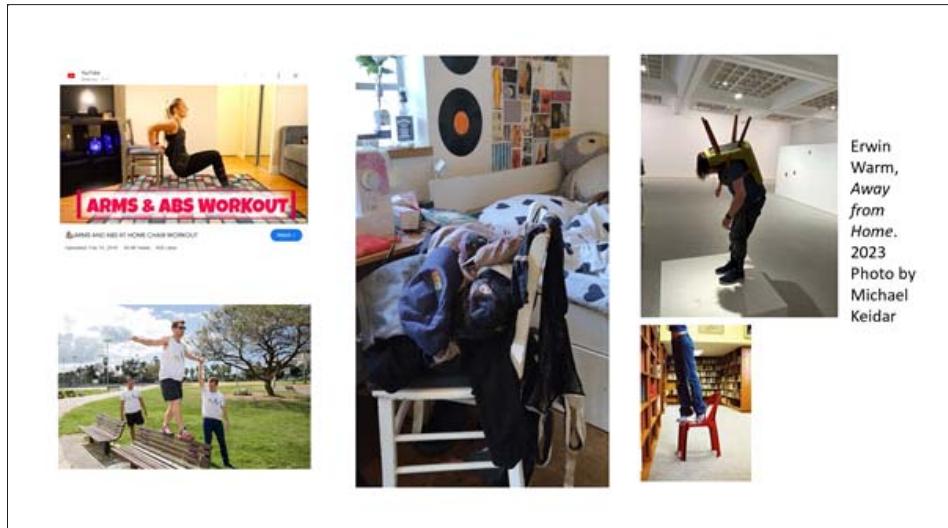


**Figure 2.** Variety of uses of chairs: variety of uses of one form.



**Figure 3.** Fences used for sitting.

Petroski's research about the evolution of tools is helpful here. He proves that the ontology of design is based on more on its visuality than on rationality. He highlights the appeal of form, rather than the designer's rational plan, as the driving force behind design innovation. He argues: "Whatever its intended function, an object's form alone often suggests new and more imaginative forms, as

the stick did the fork and the shell the spoon. And it is no less the case with manufactured things" (Petroski 1994, 51). Form even has the potential to lead to the development of function; Petroski presents the paper clip as an example of the "almost limitless functions to which a single form can lead" (Petroski 1994, 52). A study on paper clips from 1958 found out that: "only one in ten paperclips was ever used to hold papers together. Other uses included "toothpicks; fingernail and ear cleaners; makeshift fasteners for nylons, bras, and blouses; tie clasps; chips in card games; markers in children's games; decorative chains; and weapons." They become "objects of more inwardly directed aggression by providing something for the fingers to twist grotesquely out of shape during phone calls, interviews, and meetings" (52).

Adrian Forty puts forward a similar argument about the variety of forms based on our attraction to forms in *Objects of Desire.* Under the title "Theories of Diversity", he asks "How are we to explain the compulsion which gripped so many manufacturers to be so prolific with designs for their products?" (Forty 1986, 87). Forty supplies some possible answers, which include the feeling of individuality and freedom that a diversity of forms imparts to the owner of the object, a desire to increase sales, or a wish to allow imagery in design to relate to ideas and social movements: "Through the designs of knives, watches, clothes and furniture to suit every rank and station in life, one can read the shape of society as manufacturers saw it, and as their customers learned to see it. . . . And to know the range of different designs [is] to know an image of a society" (93).

All of these answers have to do with the appearance of design objects and very little to do with a rational plan of proper function that the user must detect. They all point to the power of form and the drive for visuality. Like Petroski, Forty notes that the various appearances of design products as they evolve bring out new needs, new tools, and inspirations for further design. Elsewhere, I have elaborated on a theory of "attachment to forms" about why we create metaphors—a phenomenon that is closely related to the two core ideas that various forms exist for one function and that one design form has various uses. I am trying to track the reason for our basic tendency to use known forms as sources for reconstructing concepts and objects, such as using the concept of physical depth in the metaphor of a deep thought or using the shape of a banana to design a chair or a purse. I suggest that this is because we cherish certain forms and that those forms persist through time, valued, referred to, and hinted at. They are recycled, borrowed, or duplicated. They provide joy and solace, shaping layers of culture; organizing thoughts, concepts, and beliefs; and enriching our very existence (Gal 2020, 73–73; 2022, 14–15).

### The Rationalism versus Visualism Debate in Design

Interestingly, despite the sensuous thickness and visual richness of design, the majority of the current theories of design present it as a field based on rationality in terms of both the creative process and design products. The authors of "Rationality in Design" from 2009, Kroes, Franssen, and Bucciarelli, declared,

> It is a premise of much work done in the field of design methodology and engineering design itself that rationality plays a significant role in design processes, not only at the level of the organization of design processes, but also at the level of the design of products. The underlying idea is that many of the decisions that are made regarding design — regardless of whether they concern the set-up and execution of the design process or the object of design itself — can be justified on the basis of reasons (arguments)) (Kroes et. al, in Dov M. Gabbay, Paul Thagard, John Woods 2009, 565).

A similar approach is manifested by the prominent theoretician of design Donald Norman is based on the idea that "design takes root in cognitive science—a combination of cognitive psychology, computer science, and engineering, analytical thought" (Norman 2004, 8–9). He claims that the starting point of design is rationalist mental content, a conceptual model that is supposed to be communicated through design work, which then produces an equivalent mental model in the user's mind (Norman 2007, 95; 1990, 189). Norman argues for a rationalist evaluative standard as well,

claiming that the "the most important part of a successful design is the underlying conceptual model. This is the hard part of design: formulating an appropriate conceptual model and then ensuring that everything else is consistent with it" (Norman 1999, 39). According to this model of rational coherence, a good conceptual model allows us to predict the effects of our actions. For Norman, design ought to produce efficient environments and therefore its function should be transparent enough that the user, who Norman refers to as the interpreter, can easily understand it. This goal is accomplished through a consistency between the conceptual model the designer provides, and the presentation of an object's operations and results. Like other rationalist philosophers of design, Norman believes that efficiency is possible through a sound, rational linearity in design. According to rationalist thought, the result of a design should be the user's correct engagement with the object that is produced. Design thereby prevents the user from making what Kahneman refers to as the "systematic errors " our minds are susceptible to (Kahneman 2013).

However, neither the forms or appearances of design nor our engagements with design objects are bound to rational linearity or are consistent with a conceptual model. Pye notes that the form of design is not chained to a conceptual model: "the form of designed things is decided by choice or else by chance; but it is never entailed by anything whatever. Nothing in the realm of design looks like that because it has got to be like that" (Pye 1978, 13). Pye does not assume rational linearity, emphasizing instead that "efficiency . . . justifies no design in itself" (95). Similarly, users' engagements with design objects often depart from the conceptual plan and from the linearity that rationalists assume runs from the mind of the designer to the mind of the user. Users' engagements with design objects are sensual, wide-ranging, dynamic, and creative and may be modified many times. They are based on the intensity of visuality, on human beings' attachment to forms, on the affordances of the object's appearance, and on its emergent properties after production, which often cannot be planned or preconceived. While some will call these departures errors, I disagree. New uses develop because humans are visual beings who interact with visual surfaces.

This argument is part of a more comprehensive theory of visualism that endorses the visual turn in the humanities and social sciences. Acknowledging the impact of visuality on us, the visual turn identifies the visual sphere, rather than the rational mind, as the proper sphere for studying our essence, ontology, and our culture. In this framework, the phenomena of the variety of forms a function can take and the multiple ways one form can be used after production are paradigmatic for proving the visualist nature of human beings. Thus, design objects are definitive in the rationalism versus visualism debate.

Rationalist definitions of design align with the rationalist project of philosophy, while visualism embraces externalist philosophy and more boldly confronts the messiness of external reality and its impact on us. Rationality is the ability to choose between alternatives by exercising cognition rather than being led by feelings, urges, personal preferences (including aesthetic ones), or external pressures. Rationalist philosophy classifies this ability as superior to others. In the case of design, the kind of idea endorsed by rationalist theoreticians, albeit not explicitly, is *instrumental rationalism*, which is distinct from epistemological rationalism. Epistemological rationality is the justification of views and knowledge based on reasoning, cognition, and logical consistency, and the practice of "holding beliefs that are commensurate with available evidence" (Stanovich, West, and Toplak 2011, 792). In contrast, instrumental rationality focuses on accomplishing goals, on using reason to achieve desired ends efficiently by selecting the means that are most likely to achieve the desired outcomes. It is well characterized in "Intelligence and Rationality" as follows, and note how well it applies to the rationalist philosophy of design and practice, which sees the process of creative design as seeking efficiency through planning, embodying, and tracking a proper function:

> In its simplest definition, instrumental rationality is behaving in the world so that you get exactly what you most want, given the resources (physical and mental) available to you. Somewhat more technically, we could characterize instrumental rationality as the optimization of the individual's goal fulfill-

ment. . . . Epistemic rationality is about what is true and instrumental rationality is about what to do. (Stanovich, West, and Toplak 2011, 795)

According to Joseph Raz's well-known critique, instrumental rationality is (mistakenly) considered to be the basis of practical reason, "of following the means to our ends" (Raz 2017, 1, 23). Raz thinks that this claim is too reductionist because we sometimes exercise a broader normativity, a judgment regarding the "content of the ends," about the values of the ends themselves (17). Even more basically, our conduct is often guided by important noninstrumental reasons that are not aimed at preplanned ends and are not necessarily motivated by preexisting desires. According to Raz,

> These reasons often demand certain actions regardless of whether they are the most efficient means to an end. In particular there is no specific form of rationality or of normativity that concerns the relations between means and ends. Philosophers fostered a myth of instrumental rationality, sometimes taking it to be the only, sometimes the simplest and clearest type of practical rationality or of normativity. (24)

Nevertheless, instrumentalist rationalism in design is still a fairly reductionist view. It requires instrumental coherence from both the designer and the user, who are connected through the design work, which is supposed to communicate how an object should be operated and evaluated based on its efficiency in achieving its preconceptualized end. The rationalist definitions of design accordingly describe design as originating *before* the object is produced, relying on intentional plans whose products are carefully constructed to realize that purpose and to be used properly in line with these purposes. "All in all, there are three stages that follow from the goal: intention, action sequence, and execution," Norman states (Norman 1990, 48). Rationalist definitions consider the product to be a means to an end; they take for granted that both the product and its uses follow logically from the mental content of the designer as some sort of entailment. Such definitions usually do not cover the autonomous power of the medium itself or the user's immersion in the power of composition, which is a *post-production* emergent property of the object.

The instrumentalist roots of the philosophy of design lie in the twentieth century. In 1938, R. G. Collingwood described what came to be known as instrumental rationality in *Principles of Art*, where he defines craft (and design) as "the power to produce a preconceived result by means of consciously controlled and directed action" (Collingwood 1968, 15). The foreknowledge, Collingwood clarifies, ought to be precise: a designed table is not, could not be, based on vague plans about size and proportions. In 1955, the prominent philosopher of design and industrial designer Henri Dreyfuss argued in *Designing for People* that the motivation for design is "the drive for something better, for more comfort and convenience," to conserve "a person's time, effort, and nerves as well as prevent injury" (Dreyfuss 1974, 15, 21). A similar instrumental rationalist proposition is offered by Glenn Parsons in *The Philosophy of Design* from 2015. He defines design as "the intentional solution of a problem, by the creation of plans for a new sort of thing" (Parsons 2015, 11). Parsons associates rationalist intentionality with "a practical or utilitarian nature." (Parsons 2015, 22). According to Parsons, affordance, unintentional or unplanned uses, and various unforeseen effects or results are not part of the design. Another recent manifestation of instrumental rationalism regarding design is Jane Forsey's *Aesthetics of Design*. Despite her classification of design as an aesthetic phenomenon, Forsey identifies a rational linearity that flows from the designer as the planner to the design product to the user of the design object in the proper way. Each design product, she argues, "is meant to be used in a specific way: the planes flown, the shoes worn, the office chairs sat in" (Forsey 2013, 30). Forsey argues that the identity of the design object *as design* is constituted by its form— "What else is to distinguish a Philippe Stark goblet from a generic one purchased at Walmart if not its formal elements" (41). However, she associates the aesthetic value of the design object with the way its form contributes to its function and efficiency.[1]

Norman also characterizes the visuality of design as subjugated to its predetermined plan. He refers to "a frustration of everyday lives, with inefficient objects, "ones that we can't figure out how to use, with those neat plastic-wrapped packages that seem impossible to open, with doors that trap

people, with washing machines and dryers that have become too confusing to use" (Norman 1990, 1–2). Thus, Norman portrays a normative instrumental rationalist reductionist picture of design. For him, "well-designed objects are easy to interpret and understand" (2). Designers can produce such objects, he claims, by taking into account the psychology of materials in order to design objects that produce transparent signals. He calls this process "natural design" (4). Natural design objects clearly direct the user how to engage with them; examples include the horizontal plane of the chair and the shape of the chair that invites a specific position—no hesitations or errors—because, says Norman "a chair affords ('is for') support and, therefore, affords sitting" (9). Therefore, he privileges the predetermined plan over the affordances of the material and the emergent uses of the design object, even though the uses of chairs are diverse and the forms or appearances of chairs have great importance for many users. Throughout history, chairs designs have showcased numerous styles, some of which are exceptionally crafted, beautiful, and even symbolic. In *The Politics of the Artificial*, Victor Margolin refers to one of the "non-sitting" uses in his account of the designer Massimo Vignelli's exaltation in response to the chair that Ludwig Mies van der Rohe designed for Villa Tugendhat: "Vignelli celebrated its aesthetic value rather than its functional qualities: 'I sit on a Brno chair all day long, not the most comfortable chair. There are a thousand other chairs done by friends that are terrific and much more comfortable, but no one has that class. All the time my mind gets massaged by that class!'"(Margolin 2002, 43) Margolin labels such emergent properties of the design object "reflective parameters," which are distinct from an object's "operative parameters." While Margolin makes the mistake of saying that the operative parameters "are limited by the configuration of the product itself" (again, look at the various uses of chairs), he emphasizes that "there is no limit to the parameters for reflection. We can think or have feelings about a product in any way we choose, whether we focus on its operative value, its poetic qualities, or its social significance" (42).

Norman's wish for instrumental efficiency would trap users in a sphere of heteronomous efficient operations that has been predetermined for them. An example would be the transparent and "efficient" Nespresso coffee machine, which limits the user to a closed universe of premade capsules and three buttons. Kahneman's general philosophical observation that the thought of the world as "more tidy, simple, predictable, and coherent than it really is" could be applied to design, and helps challenge the instrumental rationalist's idea of controlling either the form of the design object or the users' engagements with it:

> The illusion that one has understood the past feeds the further illusion that one can predict and control the future. These illusions are comforting. They reduce the anxiety that we would experience if we allowed ourselves to fully acknowledge the uncertainties of existence. We all have a need for the reassuring message that actions have appropriate consequences, and that success will reward wisdom and courage. (Kahneman 2013, 205)

In contrast to the rationalist approach, visualist theories define design as originating in the object itself, in its form, appearance, and affordances. Visualist approaches to definitions of design embrace externalist philosophy and confront the messiness of external reality and its impact on us. In visualist theory, the design object is an open space of emergent properties and creative and improvised encounters. These are not guided by the designer's intention or by the embodiment of that intention in the design object. The ways that users interact with an object do not always cohere with the designer's belief about the transparent function of the object or the object's efficiency in achieving the purpose the designer intended, or "optimization of the goal fulfillment". The same is true of the multiple forms that are created for design objects that have the same function. As Margolin stresses, design theory and practice ought to take into account "the world situation in its largest sense" (Margolin 2002, 80). Design theory must consider the external dynamic of reality—"a world situation that itself is in turmoil" (79). True, the design object may invite "proper" uses. But because of the visuality of the object and the power of its composition, it affords many other uses that are dependent on individuals and communities of users. The preconceived uses are merely one group among the

possible uses, views, and aesthetic experiences, interpretations, and even emotional relations that emerge as users interact with a design object. These often cannot be preconceived, conceptualized, or planned. Indeed, the use of a chair as a clothes stand, an exercise device or a makeshift ladder, the use of a fence as a bench, or the use a bench as a balance board are often more substantial than the intended purpose. These emergent uses often become well-established and become part of the identity of the object. The rational instrumentalist conception of choosing the most efficient ways, materials, or tools to reach an end also does not apply to the variety of forms for objects that possess the same function. These various forms are chosen by both designers and users mainly because of aesthetic motivations rather than because the person has a goal of instrumentally and efficiently achieving functional ends. Form thus activates a generative power of experiences, expressivity, metaphors, or newly produced meanings.

I, therefore, claim that the identity of the design object is not determined by its instrumental rational plan and does not naturally operate through a rational line of ends, means, and proper use. Thus, efficiency is not necessarily the best parameter for judging a design object's effectiveness. In light of our visualist nature, design mainly operates by its form and appearance, which also determine the discipline of design's progress and vitality.

The debate about instrumentalist rationalism versus visualism in design puts design objects and people's encounters with them in the context of the wider and more fundamental controversy between rationalism and visualism regarding human beings. One might argue that the gravitas of design objects could contribute to the disillusionment with rationalism and the emerging theories of the visual turn. Rationalist definitions of design derive from the Western tendency to think that using rational reasoning to accomplish ends represents humans at their best. This view fails to see the value of external influences. In an age of a vast proliferation of images (including AI-generated images), interfaces, and screens, we can no longer ignore the disruption of the linear flow that rationalist design theories associate with design. We can no longer ignore the importance of our visual engagement with objects, which is evidence of our visualist and externalist nature. A philosophical analysis of design ought to reconsider what rationality means in general. The question is whether we are primarily rational beings, interacting with our environment through pre-planned uses and flourishing in efficient spaces, or we are visual and aesthetic beings, interacting with our surroundings through the creation and observation of forms and thriving by achieving well-arranged or inspiring compositions.

## Anti-Rationalism and Affordance

The rationality of the designer's mental content and preconceptualized plan often has no bearing on the space of the design object. We engage with objects in the perceptual space of interactions, which consists of the appearance, form, and power of the composition of the object that the viewer or user is invited to explore. Therefore, I propose that:

1. The variety of forms for one function and the variety of uses for one form prove that our relations with objects are affected by our visualist nature rather than by rationality.

2. Accordingly, the term "affordance," which is based on visuality and emergence, should be used in place of the terms "intention," "plan," "function," and "efficiency."

"Affordance," a term coined by James Gibson, which means the space of possible uses and interactions that an object, or environment, allows, is logically related to the frantically visual era we face and the corresponding visual turn. Affordance is conditioned on visuality, which allows for emergent properties and relations with design. In the case of a chair, its visual structure allows, even invites, various uses. It may range from the back of the chair inviting a coat to hang, to the entire chair being transformed with a glass top to serve as a coffee table, as demonstrated by Enrico Salis in

his piece *Archetype* (2012, figure 4). *Archetype* is described in *Social Design Magazine* as follows: "The objective that Enrico Salis tried to achieve with this table is to break the link between the object and its archetype. Enrico Salis intends to awaken the observer's imagination from the daily routine" (Social Design Magazine 2012). My analysis of this concept contrasts with that of Norman, who reduces affordance to the transparency of the object regarding its specific intended plan and instrumental efficiency (Norman 1999). "Affordance" also fits new theories of everyday aesthetics and the visualist philosophy of design. Gibson first used the term "affordance" in *The Senses Considered as Perceptual Systems* (1966) and extended the definition in *The Ecological Approach to Visual Perception* (1979). Gibson claims that "the observer and his environment are complementary. So are the set of observers and their common environment" (Gibson 2014, 11). He speculates that the theory of affordance may advance from the perception of the visuality of surfaces to the perception of what the surfaces afford: "How do we go from surfaces to affordances? Perhaps the composition and layout of surfaces *constitute* what they afford. If so, to perceive them is to perceive what they afford" (119). Applying the theory of affordance to design, we can shift our focus from the rational plan to the power of the visual piece, and to immersion in the power of composition or configuration of surfaces. These, as we saw, often do not cohere with the intended, rational plan. In this frame of thought, the theoretician of material culture Judy Attfield criticizes in her *Wild Things* what she describes as "the central 'given' in design theory . . . that assumes an agency on the part of the design process to be able to predict and control how the product will be put to use within certain parameters of space and place" (Attfield 2000, 77). Attfield proposes a more contextualist view of the material reality of our lives, seeing objects, especially design objects, as "social things within a dynamic existence in the material world of everyday," which, for example, sometimes create design objects as "things with attitude" (32).



**Figure 4.** Enrico Salis, *Archetype,* coffee table, 2012.

We can now conclude with an individualizing design proposition that runs as follows:

Although design products are useful by their nature, the actual space of design is an open aesthetic space that both endows them with identities as members of the group of design objects and distinguishes between them as design objects and imparts to them affordances and emergent properties.

The main point is that our interactions with visual appearances are of great importance for the critique of rationalism and for understanding how visualist we are. Our creative, particular, and emergent relationships with the appearances and visual forms of design objects are innately attached to our visual being. We are attached to forms, and the forms we encounter inspire us and leave a significant impact. They are passed down through cultures and generations, becoming well known and deeply rooted in our cultural heritage. Forms are not just used for their immediate function; they also inspire the creation of new objects and the reconstruction of existing ones. This, rather than instrumentalist rationalism, is what motivates design. William Morris, the nineteenth-century aesthetician, designer, and leader of the arts and crafts movement, pointed to the aesthetic properties and affordance of useful objects as a basic human condition. He said, "To give people pleasure in the things they must perforce use, that is one great office of decoration. . . . I say that without these arts, our rest would be vacant and uninteresting, our labour mere endurance, mere wearing away of body and mind" (Morris and Morris 2012, 5). Even proponents of modern industrial design, such as Herbert Read, agreed that the meta-motivation of design was aesthetic, pointing out that design began with the introduction of a variety of forms for functional tools, with the departure from the wish for efficiency. In his significant work *Art and Industry: The Principles of Industrial Design* (1935), Read associated the variety of forms for one function with free choice and personal freedom:

> Early man, we may assume, in making his implements was governed entirely by considerations of utility. A hammer had to have a blunt head, an arrow a sharp point, and so on. Form evolved in the direction of functional efficiency. But a moment arrives in the development of civilization when there is a choice between equally efficient objects of different shape. The moment that choice is made, an aesthetic judgement has operated. What are the motives that lead man to prefer one shape to another? (Read 1935, 15)

When we think about design as existing in the aesthetic level, we can examine even instrumental excellence through visuality. Function itself may possess other properties besides functionality, such as expressivity and affordance. Arnheim's eye-opening theory of design in "From Function to Expression" draws attention to the affordance of function that "enters the aesthetic realm by means of the expressive pattern of shape, colour, movement, etc. into which it is translated" (Arnheim 1964, 38). The visible elements of function join the affordance of the design object and prove the narrowness of the instrumental rationalist idea of means and ends in design:

> In a functional-looking object, we may see the dynamics of pouring, soaring, containing, receiving, etc. We also see such "character traits" as flexibility, sturdiness, gracefulness, strength, etc., which, just as in a representational work of fine art, are intimately and totally related to the theme: the gracefulness of the spout consists in the graceful pouring it displays visually; the sturdiness of the Doric column consists in its supporting the roof sturdily. (38–39)

Indeed, the rationalist idea that function is given to reasoning and efficiency alone is too reductionist. Too narrow also is the conservative dichotomy between form and function regarding their roles in the visual affordance of the design product. Form may be useful and function may be visual, exciting, or comforting or it may elicit irritation, humor, or gloominess. The visuality of the solid handle of a coffee machine, which provides a good, sensuous experience to the holding hand and ease to the mind that trusts this tool, can elicit feelings of comfort and solace and ideas about the efficiency and reliability of the machine. Accordingly, we should reconsider the concept of rationality as less central to our existence, especially in our daily interaction with our designed surroundings, and instead, explore the visual sphere and our experience of it to understand our inherent nature.

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## Notes

[1] See Forsey's essay in this volume, "Design and Beauty: Functional Style" (pp. 36-43).

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# Design and the Constitution of Semantic or Conceptual Meaning

## GREGORY GALFORD & JEREMY BARRIS

**Abstract:** The main argument of the essay is that elements of design often contribute to the constitution of meaning in design objects even when that meaning is strictly of the type we typically think of as independent of stylistic considerations: the kind of meaning which is that of words, concepts, and statements. We focus in particular on the work and thought of the architect Robert Venturi. A subsidiary argument, aimed to secure the findings of the main argument, concerns the widespread postmodern line of thought that meaning in general is necessarily indeterminate and unreliable. We argue that this idea itself in fact makes equal room for the opposite conclusion: that (in this context) the meanings which design objects present are often fully the genuine meanings of the objects or the other signifieds they express.

*Keywords:* design, meaning, craft, Robert Venturi, architecture, postmodernism

We want to show that the elements of design often contribute to the production of meaning in design objects even when that meaning is strictly of the type that we typically think of as independent of stylistic or presentational considerations. This is what we shall call semantic meaning: the meaning we associate centrally with that of words, concepts, and statements. It is easy to think of this kind of meaning as independent of stylistic or presentational considerations, since in its home territory its core content appears to be unaffected by, say, its particular place in a sentence or the features of its context. For example, the content of "ball" seems the same in "the girl kicked the red ball" and "the blue ball was kicked by the boy." We want to show, however, that this independence of style and meaning is often not the case, with respect both to purely verbal contexts and to craft objects.

Craft and other material design objects sometimes also express semantic meanings through their materials and can incorporate verbal symbols as well. As we will suggest, however, some kinds of purely verbal constructions are themselves also design objects.

We will begin by showing that the elements of style often contribute to the constitution of semantic meanings even in the apparently unlikely case of words, concepts, and statements themselves. We will show this first with respect to poetry and then with respect to some strategies of everyday communication. While these strategies are purely verbal and also evanescent, we suggest that they are nonetheless forms of craft object, having the analogy to poetry that, say, household mugs have to sculptures. Next, we will turn to material craft and design objects and the relation between their design features and semantic meanings. In particular, we will look at the work and sympathetic thought of the architect Robert Venturi, with the complex expression of semantic meaning through design that his work displays.

While not always the case, it is typically true of material design objects that their stylistic features already express their semantic meaning directly and immediately of themselves. Similarly, in the context of verbal constructions, a stylistic feature of voice such as sonority can directly express, say, gravity; or bold capitals in typeface can directly express shocking import. In these cases, of course,

our thesis has nothing novel to say. Here, style and constitution of semantic meaning are one. But for this, and in fact also for the other contexts where our thesis does hopefully contribute, we want to add a subsidiary thesis.

There is a widespread postmodern current of thought that derives from the idea which we have also been implicitly proposing, that meaning is constituted by an interplay of features that are conceptually, and therefore essentially, different from each other. For example, meanings are constituted partly by their relations to and interactions with other meanings, partly by their roles in human activities, and partly by their contexts in social institutions. (For institutional contexts, consider, for instance, the meaning of "vote.") This postmodern current of thought concludes that, because this interplay between these fundamentally different kinds of features leaves room for thoroughgoing error in the effective connections of these features with each other, meaning in general is necessarily unreliably established and consequently always to some degree indeterminate. That is, meanings, and therefore the objects whose meanings they are, never really quite mean what they seem to mean, or are what they seem to be.

(This should not be confused with the pragmatist idea that meaning is a matter of what it does, with the consequence that it is localized to particular contexts of usage. In that perspective, meaning is still wholly determinate in each particular case.)

In order to secure our findings about meanings in design, we would like to show that this current of thought itself in fact equally makes room for the opposite conclusion. That is, in our context, the meanings which design objects present are often in fact fully the genuine meanings of the objects or the other signifieds they express, and they convey exactly what they appear to convey.

## 1. Words, Statements, and Purely Verbal Design Objects

The semantic meaning even of words, thoughts, and statements is often constituted partly by the design of the composition of their elements. These elements include both those which are inherently semantically meaningful and those which typically contribute only indirectly to semantic meaning, such as sound, shape, and sequence.

Design plays a role in the constitution of both semantic meaning as what is immediately expressed and also semantic meaning as it sustains legitimate inferences and other kinds of justification. The second case, that is, is semantic meaning as it sustains the establishing and expression of purported truth. Differently said, design plays a role not only in the expression of meaning or sense but also in actively *making* sense.

For an example of the constitution of meaning as what is immediately expressed, here is part of a poem by William Wordsworth. The speaker says of Lucy, whose death he is grieving:

> No motion has she now, no force;
> She neither hears nor sees;
> Rolled round in earth's diurnal course,
> With rocks, and stones, and trees.  (2004, 71)

Because the first two lines establish Lucy's inertly passive unresponsiveness, and the third links this passivity with that of all the fixed elements of the planet, the trees at the end partly convey the same meaning as the rocks and stones. Outside of this context, the two kinds of things would instead contrast in these same respects. They would register, for example, as animate versus inanimate, or perhaps as inhospitable versus refreshing. Given this context, however, even those otherwise-operative contrasts themselves, because of their unexpected irrelevance here, now contribute to the impact of the trees' signification as being just as relevantly unresponsive as the rocks and stones.

It is true that the same overall meaning could have been conveyed by placing the first two lines last. But then it would not have been the word "trees" which conveyed this inertness, since their bearing this meaning depends on their occurrence's being preceded by the emphasis on inertness as unre-

sponsiveness. Without that, "trees" would in fact have been a jarring element at that point in the reading of the poem: the meaning of inertness would have been expressed partly despite them and only very indirectly through them.

It is important here that the context the sequence provides does not only disambiguate potential alternative meanings of "trees." If the sequential context only disambiguated the potential meanings, the sequence, and therefore design, would not have played a role in constituting the relevant meaning *itself*. Instead, the sequence would simply have established that one *pre-existing* meaning rather than another was at issue. But here, the meaning of rock-like unresponsiveness is simply not part of the initial meaning of "trees" at all, as we would hear that meaning without unusual context or artifice. That is, it is not yet available as a potential alternative meaning to be disambiguated. That meaning needs to be catalyzed in the first place, established as a possible meaning for this term at all, rather than simply selected and discriminated among its already given meanings. The sequence here provides the artifice which does this catalyzing.

The mechanical simplicity of the last line's rhythm contributes to the same meaning, which again is not there without this kind of organizational device. This rhythm suggests an unvarying regularity of things, and this together with the rhythm's unnuanced simplicity evokes a pathetic absence of recourse. The effect is that what is happening is the inevitable way of things. Further, all this is resonant too in the heaviness of the line's and stanza's end on the monosyllable "trees." It is precisely because "trees" is the end of this movement that this word can and now does bear this pathetic meaning.

The role of design in constituting verbal semantic meaning is not restricted to fine art forms such as poetry. It also occurs in more craft-like design objects in everyday communication, to the extent, for example, that things that are difficult or tricky to convey need to be expressed. Articulacy is often a special kind of achievement, and part of what it requires can be the design of the composition of its elements.

For instance, when we offer a criticism of someone, if we express the criticism awkwardly and, before completing the criticism, interpolate a joke at our own expense, this combination of stylistic features helps to soften its character as a criticism. That is, its meaning now occurs as a gentler criticism, and it does so not simply in adding a soothing of the person's feelings to the criticism, but also in what is conveyed as the character of the criticism itself. Here, the stylistic or design features of the communication help to constitute the specific meaning itself of what is communicated.

With respect to the role that design plays in constituting meanings in the context of justification or in the activities of making sense, aphorisms offer a trivial example. Paradoxically, to present an inference in this form can be partly to communicate its questionable character and so require thought about it. The ear-catching, clever packaging raises the possibility that there may be less in other respects than meets the ear in this one! (Perhaps it "protests too much.") Although this does not help to establish the legitimacy of the inference being presented, it does, as part of presenting the inference, engage the protocols of truth-testing with respect to it.

Here is a more substantial example. Ludwig Wittgenstein comments in his *Tractatus* that, "Feeling the world as a limited whole—it is this that is mystical" (1961, prop. 6.45). In this statement, both the meaning of "the world as a limited whole" and the inference that it corresponds to the mystical depend on a previous argument: that reference to what is outside the world of facts cannot have sense (e.g., prop. 6.42). This argument delineates a limit to the sense of the world, and so establishes a particular and otherwise unavailable meaning of the idea of the entire world as limited. The prior argument also supports the inference that this newly meaningful idea corresponds to the mystical, since this idea involves the further idea of a boundary that characterizes sense or meaning as a whole and yet, as specifying a limit precisely to sense itself, cannot be made straightforwardly intelligible.

Just as with the meaning of "trees" in the Wordsworth example, the meaning of "limited world" here depends on the spatial precedence of the relevant argument. It is true that the inference can, instead, be explained after its being stated. But even then, the statement can still only be understood

after the explanation. The explanatory argument is therefore still prior logically. While the argument, then, can be placed spatially or temporally before or after the inference it explains, the understanding that the argument contributes must still be assimilated first before the inference can be understood. The argument remains prior in the order of meaning and so of logic. Design, then, is still crucial to the very meaning of the inference as an intelligible and so genuine inference, but here it is design in logical rather than physical space.

Still, the physical sequence, either way, does affect the meaning of the inference itself with respect to aspects of how that inference is conveyed in its communication. Putting the explanation before the inference presents it more clearly; while putting the inference before the explanation perhaps makes the inference intriguingly puzzling and so, for example, makes it more inherently motivating to be explored.

We have discussed the role of design in constituting the semantic meaning of purely verbal constructions, both in the fine art form of poetry and in the form of what we have argued are verbal craft objects. We turn now to the role of design in the constitution of semantic meaning in material craft objects.

## 2. Material Design Objects

In the case of material design objects, when they express what we have been calling semantic meanings, these meanings are already typically directly and entirely established by the stylistic elements, those which in verbal contexts contribute only indirectly to semantic meaning. These are elements such as sound, shape, material quality, and sequence.

So, for example, a soup tureen can express dignity, formality, or status through the sheer quantity and precision of its ornamentation, the heavy look and feel of its metal, or the simple elegance of its lines. Again, a cathedral spire can express devotion to heavenly grace by the long, swift, unmistakable pointing upward of its lines in permanent stone.

As we have noted, where the stylistic elements are themselves entirely the carriers of semantic meaning, our thesis has nothing to contribute. But we do have our subsidiary thesis in this context, and we will return to that below.

In addition, however, material design objects do also express semantic meanings in other ways to which the stylistic elements contribute indirectly, and material design objects can incorporate verbal meanings as well.



58. Ledoux. Project for a Gateway, Bourneville
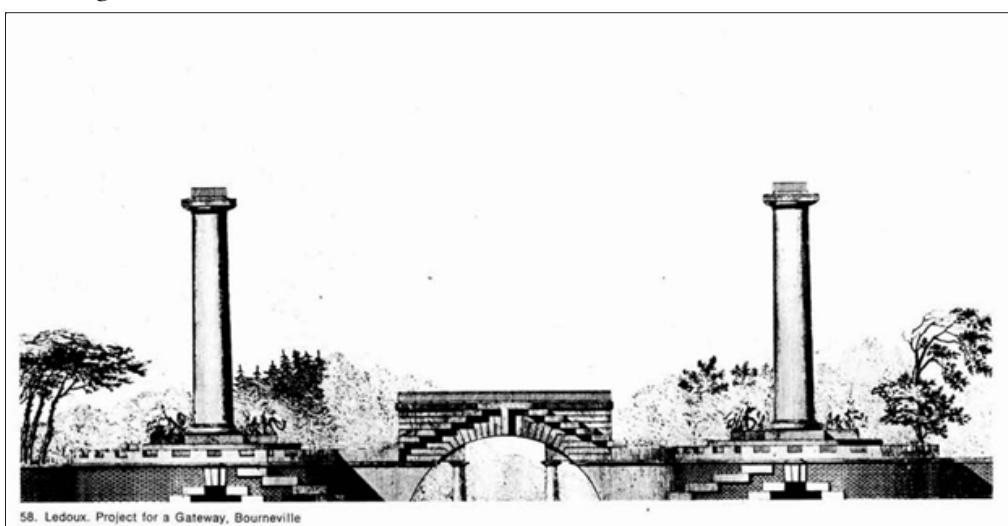
**Figure 1.** Claude-Nicolas Ledoux, *Project for a Gateway Bourneville*
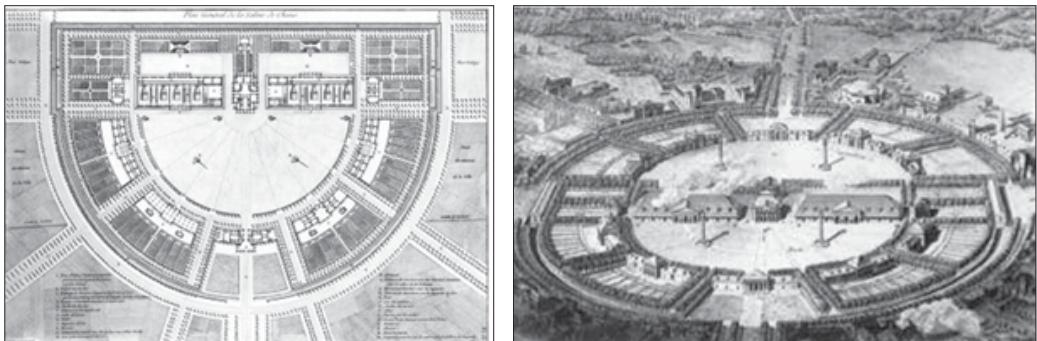
**Figure 2.** Claude-Nicolas Ledoux, *Gateway Bourneville,* plan and perspective

One kind of case where the design features do not themselves always immediately constitute the meaning is that of rhetorical elements in architecture. For example, in a project for a gateway at Bourneville by the architect Claude-Nicolas Ledoux, there are very large columns that are structurally entirely redundant on either side of the gateway (Figures 1,2). There is a wide gap between each of them and the gateway, so that while they tower importantly, they very evidently serve no functional purpose. "Expressively, however," Robert Venturi (1977) writes, "they underscore the abstractness of the opening as a semicircle more than an arch, and they further define the opening as a gateway" (40). Given the mass and massiveness of these signifiers working to produce these meanings of "semicircle" and "gateway," both of the meanings are comically anticlimactic; and they are all the more semantic meanings for that.

In the next section, we will discuss the thought and work of Robert Venturi in some detail to illustrate other ways in which the stylistic elements of architectural design contribute indirectly to the expression of semantic meanings. Here, we may briefly mention some examples of design objects that incorporate verbal meanings, where the stylistic features contribute to the constitution of those meanings.

In menus, the spacing, typography, and quality of the paper and ink, for example, contribute to the meaning of the entries that they are of a high or else a negligible quality, and even that the dishes are prepared, say, with a particular fineness of care or should be received with a particular refinement of appreciation. In billboards, the garishness of the coloring and the size of the lettering, for instance, can suggest different degrees of crassness to the message that the words convey, and with it to the specifics of what that message is. And the subtlety or sensuousness of the art design of book covers can affect, say, the archness or blatant character of invitation of the book title and with that, again, can affect what specifically that book title communicates.

We turn now to the work and thought of the architect Robert Venturi, both of which are deeply sympathetic to our thesis.

## 3. Robert Venturi

The "duck" versus the "decorated shed" was a theory developed by architects Robert Venturi and Denise Scott Brown in their book, *Learning from Las Vegas*, which argued that architects of the 1960s viewed their craft as pure and devoid of semantic meaning. Buildings were forms in light that express their function with honesty, while Venturi and Scott Brown argued that the 'messy vitality' of buildings with signs and other visual cues was more truthful as it represented how we live our lives and experience architecture (Venturi et al. 1968).

Rene Magritte's painting of 1929, entitled *The Treachery of Images*, has an image of a pipe with the title below proclaiming that it is not one. In a related approach, Venturi designs with an intention to challenge our preconceptions of what we are viewing. Using architectural elements in unconven-

tional ways enabled him to provoke new meanings for experiences within our built environment. The house he designed for his mother Vanna Venturi in 1962 (Figures 3, 4) challenged architects as custom designed homes were focused on modern ideals of function and aesthetics that often ignored history and social context. He said that the house "is both complex and simple, open and closed, big and little, some of its elements are good on one level and bad on another" (1977, 118).



**Figure 3.** Robert Venturi. *Vanna Venturi House,* 1962–4
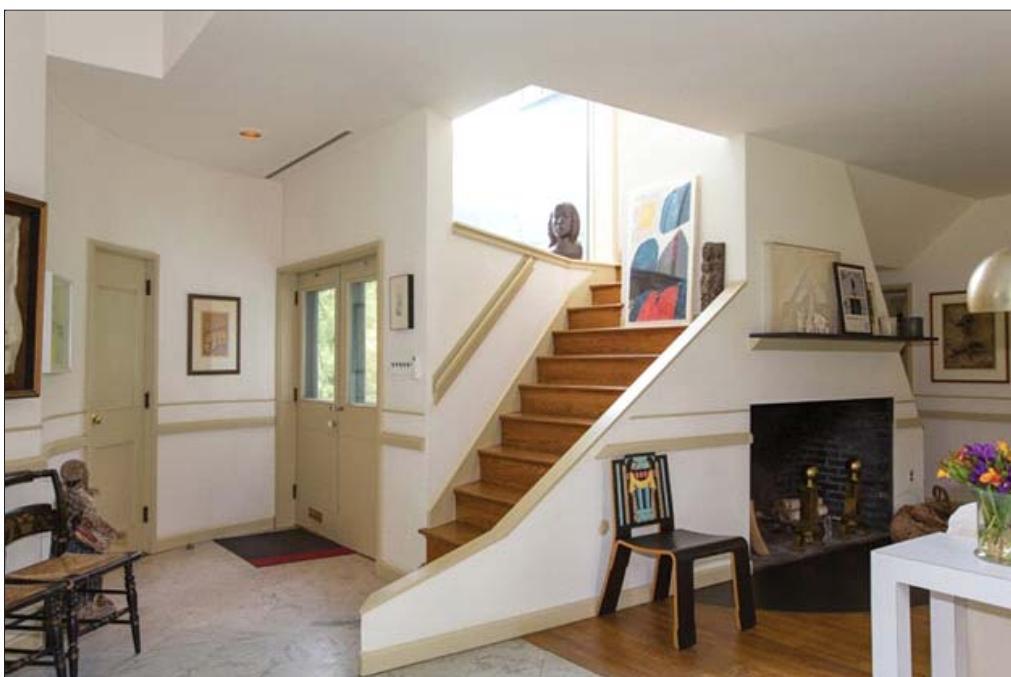


**Figure 4.** *Robert Venturi. Vanna Venturi House interior, 1962–4*

His home for his mother presented meaning to the viewer by challenging our perceptions of what a home should look like with the use of basic components of style. It is as elemental as a child's drawing of what a house should be. It plays with scale in that same way as its front façade is an over-scaled pediment that is broken in the center. A chimney is deliberately over-scaled to make it seem unsophisticated and naïve. It is built with modern materials and modern windows but aims for simplicity in meaning versus sophistication in form. It has an oversized void at the center indicating a monumental entrance, when it is actually quite small. It has a pronounced lintel that binds the two sizes of the split façade to make equal sides appear balanced, yet the windows from side to side reflect interior functions and are not equal. Applied molding around the building suggests that it is at human scale until you stand next to it. The façade tells us that it is both a modern building and a traditional house, providing dual meanings without confusing the two. Returning to Magritte, Venturi's house is a sort of "This is not a pipe" idea in reverse or without the edge: it gives a message something like, "This is also a house after all!"

A more contemporary building was his Guild House home for the elderly of 1963. It is not an expensive building, nor in an elegant neighborhood. Its primary elevation alludes to multiple mean-ings beyond its functional characteristics, as it refers to both urban forms of signage and to the lifestyles of its elderly population. Venturi proposes honest communication in building meaning when he discusses overly designed objects versus ornamented sheds. The buildings tell us who they are through their signage and graphics, as this building does.

The red brick building is symmetrical with stylistic devices that provoke other interpretations. At its base is a white wall with a large text that proclaims its name. The white background to the oversized letters acts as a sign, and is divorced from the elevation above. It visually grabs the pass-erby, and announces itself to the street. Above the first floor sign are four floors of apartment balco-nies with flanking windows which act as monumental motif for the brick façade. Expressed concrete slabs and columns visually bind the façade and allude to the shape of a tree. The top floor contains a commons room that has an oversized arched glass window. Its shape and size cap the building and respond to the urban character and scale of its surroundings, giving civic significance to a room largely used for watching television. Above, the central axis of the façade culminates at the roof line with an oversized antenna. Its size and placement, exposed and steeple-like, allude satirically to the television watching habits of the elderly residents. The commons room with its oversized window and antenna are a statement about the quality of elderly life in 1960s America (1977, 116).

In his 1966 text on postmodernism, *Complexity and Contradiction in Architecture.* Venturi argued that design gives meaning to the built environment. Within his work, the buildings use a series of architectural devices that act as signifiers. This enables complexities of comprehension that can work at dual scales, from the personal to the urban. "Both-and" is the term used by him to refer to elements that can be interpreted in more than one manner. The use of ambiguous meanings of the part to the whole is to produce "an architecture which includes varying levels of meaning that breeds ambiguity and tension" (1977 [1966], 23).

Venturi cites an example by architect Frank Furness in his main stair at the Pennsylvania Academy of the Fine Arts in Philadelphia. The main stair is too large for the spaces around it, as the adjacent landings and wall openings are smaller and make it feel uncomfortable. However, the stair is not responding to its immediate functional use. It gets its proportional meaning from its connection between the large hall above and the scale of the street outside as it connects these two monumental spaces (1977, 25).

This tool is linked to his device of the 'double-functioning element". Venturi used elements that embodied double meaning, ones that can operate at the scale of the building, but also at the scale of the street. The "double functioning element" differs from "both-and" in that it is more specific to its architectural usage than a comparison of the parts to the whole. The example of the Ponte Vecchio in Florence shows that a bridge can be a building and a building can be a bridge. The building acts

as an extension of the neighborhoods to each side, with shops along the path, while at the same time bridging the Arno River, completing its basic function (1977, 34).

Contradiction as a design tool is both juxtaposed and adapted by Venturi in his quest for richness versus clarity. A "super adjacency" occurs when compositional elements are used in dissimilar locations that produce an almost violent reappraisal of its meaning. He gives the prime example of Le Corbusier's building in Ahmedabad that provides a diagonal orientation of vertical sun-shades in one direction while its entry ramp moves in the opposite, forcing a contradictory experience on the user (1977, 56). A Renaissance building façade may have elements which serve its functional purpose while also having dissimilar elements which address larger civic issues, such as the example of Michelangelo's Palazzo Farnese. This building has a central loggia on the upper floor that breaks the rhythm and scale of the façade, contradicting the visual order, while it responds to the scale of the city beyond. The major part of the building provides a restrained answer to its surroundings, while the over-scaled and open loggia breaks the order and announces it is a place where important events will happen, providing dual meanings within the same space (57).

Venturi's postmodern view involves a historical sense of inside versus outside spaces with an embrace of the contradictory. He values the historic European city form with its streetscapes of complex building facades that enclose interior private and public spaces that are hidden from easy view. He proposes form that allows the unexpected to occur, whether in a horizontal plan view, or in a vertical building elevation. Contradictory meanings between the experience of the sober streetscape and the playful spaces within allow for aesthetic experiences of joy and surprise.

The text ends by discussing the "obligation toward the difficult whole", which is defined by Venturi as "a multiplicity and diversity of elements in relationships that are inconsistent or among the weaker kinds perceptually" (1977, 88). Elements that bind as well as inflect are components of this difficult whole and produce further dualities in meaning and perception with examples ranging from chairs designed by Gaudi to the Berlin philharmonic hall by Scharoun, both of which defy modern orthodoxy by their fluidity in shape and configuration. The chairs of Gaudi are anthropomorphic in their forms alluding to the human body which will use them, while the orchestra hall of Scharoun has a sculptural roof line that mimics the crescendos of sound that it is to contain (1977, 102).

Venturi completes his text with a comparison of a historic urban form that is seen as orderly and serene, the campus at the University of Virginia designed by Thomas Jefferson. He juxtaposes that view of a designed ideal with an image of a typical commercial main street in any small city in America. The assemblage of signs, facades, traffic and lights creates a sense of disarray that is anything but serene. As a coda to his work, he suggests that our messy urban environments that seem chaotic are okay, as they provide meaning that reflects who we are. As he asks, "is not Main Street almost all right?" (1977, 104).

## 4. Postmodernism and the Genuineness of Meaning

We have been suggesting, as postmodernism also does, that semantic meaning is constituted by an interplay of features which are very different in nature from each other. As we have noted, there is a prominent postmodern current of thought which emphasizes that this interplay through fundamental differences leaves room for thoroughgoing error in the connections of these elements with each other, with the result that meanings in general are necessarily indeterminate and unreliable. That is, meanings, and therefore the objects or other signifieds whose meanings they are, never really quite mean what they seem to mean or are what they seem to be. This is a line of thought which is widely represented in philosophy in all its branches, as well as in aesthetics, literary theory, the social sciences, and political theory of many different relevancies.

We would like to show that this current of thought itself in fact makes equal room for the opposite conclusion. That is, in our context, the meanings which design objects present are often in fact fully

the genuine meanings of the objects or the other signifieds they express, and they convey exactly what they appear to convey.

Most purported Derrideans, for example, argue in the name of deconstruction that apparent meanings substitute illusory stability or fixity for fundamental indeterminacy. Most Lacanians argue, in Lacanian language, that meanings substitute an illusorily stable Imaginary for an always shifting Symbolic. And many purported Wittgensteinians argue that "meaning" has no consistent character to be constituted in the first place but that the understanding of meaning as something determinate is an illusory misunderstanding of what is in fact indeterminate "usage." We have been "bewitched by language" (Wittgenstein 1958, prop. 109: "Philosophy is a battle against the bewitchment of our intelligence by means of language").

In fact, postmodernism in general is a term so abused as to be multi-directionally contradictory in what it is taken to express. More essentially, however, postmodernism properly understood *does* make room for such contradictions, but not in ways in which they simply exclude each other. Consequently, the same resources on whose basis it is argued that meaning is necessarily indeterminate show equally and, what is more, equally of their original and authentic inspiration, that it is not necessarily so. So, for example, as we shall argue below, Jacques Derrida, Jacques Lacan, and Wittgenstein themselves all recognize and insist that "indeterminacy," "slippage of the signifier," and "usage" are not themselves fixed and stably determinate essences which can define meaning once and for all.

And what a very strange thing, especially for purveyors of such very subtle forms of thinking, it would have been for them to have thought otherwise!

Derrida, for his part, describes the movement of thought he is concerned with as a "movement of the trace that implies both its mark and its erasure" (1981a, 5), and he notes that, "I try to write the question: (what is) meaning to say? Therefore it is necessary . . . that writing literally mean nothing" (1981b, 14). Since it is exploring the nature of meaning, it must mean nothing, because otherwise it relies on and so prejudges what it is inquiring into, what meaning involves. "To risk meaning nothing," he explains, "is . . . to enter into the play of *différance"* (1981b, 14), or the play of being itself differing from itself. In other words, the indeterminacy of meaning runs so consistently and so deep, in Derrida's deconstructive thought, that it applies self-reflexively to his own meanings in expressing this indeterminacy itself. Consequently, the meaning of indeterminacy itself, in this context, is indeterminate. As a result, in the very act of characterizing meaning as indeterminate, indeterminacy itself, now also indeterminate, necessarily makes room for it not to have that character, and so not to be indeterminate.

A critical analysis of meaning in general, then, has the self-reflexive character of a Liar's Paradox. If one says, "I am lying," then, if one is lying, one is telling the truth, and if one is telling the truth, one is lying. This kind of statement reverses and negates its own values in the very act of affirming them and because it is successfully affirming them.

Lacan, although he constantly emphasizes the incessant slippage of signifiers in the Symbolic order, or world of language, that constitutes our being, nonetheless also recognizes that the stable Imaginary, or world of fixed images, is not simply an extrinsic "add-on" to the Symbolic. Instead, it is part of what makes the Symbolic what it is, and so is part of its, and so our, being. Just as in Derrida determinacy is part of what indeterminacy is and how it works, in Lacan the Imaginary is part of what the Symbolic is and how it works. Samuel Weber (1991) discusses the "metonymic" movement of constant shifting or displacement in the Symbolic, and argues that:

> If the metonymic movement may be said to constitute the symbolic function "proper," its "slippage" must in turn be held in check . . . if it is not to dissolve into sheer indeterminacy. In short, metonymic displacement must itself be dislocated and disfigured . . . in order to function at all. (109)

More specifically,

> Left to its own devices, the symbolic . . . would tend to dissolve and to displace the very determinations upon which it "itself" depends. In short, without the imaginary, the symbolic would self-destruct. It is therefore no less dependent on the imaginary than the imaginary is on it. (108)

As for Wittgenstein, he does not, in the first place, insist that meaning is necessarily a matter of usage. His famous proposal is that "For a *large* class of cases—though not for all—in which we employ the word 'meaning' it can be defined thus: the meaning of a word is its use in the language" (1958, prop. 43). And, of course, it is not simply that he states it this way. One of his central arguments is that, as with the criteria for establishing rules, interpretations necessarily and appropriately come to an end at a certain point, so that, as Wittgenstein puts it, "my spade is turned" (prop. 217). For one thing, if everything were up for interpretation, we would not even be sure we were engaged in the activity of interpretation: the meanings of that activity would not be sure either. As a result, "any interpretation still hangs in the air along with what it interprets, and cannot give it any support. Interpretations by themselves do not determine meaning" (1958, prop. 198).

Again, "If you are not certain of any fact, you cannot be certain of the meaning of your words, either" (1969, no. 114). Ultimately, even "the game of doubting itself presupposes certainty" (no. 115). The certainties are given, however, and they are given by the structures of meaning established by and as part of our ways of living in our forms of life.

Another of Wittgenstein's arguments in this connection is that, while in the case of an ambiguous picture it makes sense for me to say, "now I see at as this" and "now I see it as that," it makes no sense at all for me to talk about interpreting and seeing an unambiguous picture in this kind of way.

> It would have made as little sense for me to say "Now I am seeing it as . . ." as to say at the sight of a knife and fork "Now I am seeing this as a knife and fork." This expression would not be understood.—Any more than: "Now it's a fork" or "It can be a fork too."
> One doesn't "*take*" what one knows as the cutlery at a meal *for* cutlery . . .
> If you say "Now it's a face for me," we can ask; "What change are you alluding to?" (1958, 195e)

If, as Wittgenstein, suggests, we "*look and see*" (1958, prop. 66), it is clear that, most of the time, we do not have to interpret equivocal meanings but we simply register meanings directly as the meanings they simply and unequivocally are.

Finally, Eddy Zemach (1992), among others, points out an argument throughout the later Wittgenstein's work for "our *experience of meaning*" (28). Wittgenstein writes, for example, of "The familiar face of a word; the feeling that a word is as it were a picture of its meaning; that it has as it were taken its meaning up into itself . . . And how are these feelings expressed among us? By the way we choose and value words" (1980, no. 6). Zemach explains that "A word has the aroma of the things it denotes just as a face is seen *as* sad. We do not *interpret* a certain geometrical shape as expressive of sadness; we see the sadness in the face" (36).

As a result, it is a richly meant part of Wittgenstein's mature philosophy that, for example, "*Essence* [*Wesen*] is expressed by grammar" (1958, prop. 371).

To put all of this a little more concretely, although it is true that meanings are in general caught up in all sorts of complicating relationships with other meanings and with various features of their contexts, these relationships are not always and automatically relevant. In that case, the meanings at issue are insulated from their potential disturbance. The arguments for unfailing indeterminacy of meaning are built on a self-undermining logic that itself makes room for the failure of its own meaning, and so for this insulation of meanings from incongruent, "de-determining" other meanings. As a result, the logic of these arguments themselves makes room for the clear specification of meanings and so for the unequivocal specification of what other meanings and nuances of meaning are relevant to them.

So, for example, if we ask someone at dinner to pass the salt, and they ask us which of the culturally resonant literary significances of salt we mean, or which of the symbolic echoes of salt in our emo-

tional history we mean, or which of the language games in which salt could feature as an element we have in mind, they are being deliberately obtuse. They are setting aside what they themselves fully and unequivocally recognize as what we mean. Those other equivocity-producing considerations are simply not at issue in the immediate circumstances.

Similarly, if a building is a dark, uniform mass, enormous and looming, it successfully conveys, for example, the sense of being formidable or forbidding. Of course, there are many circumstances in which people might not register it that way, even the same people who sometimes do. But this has no bearing on the meaning the building conveys when it does convey that meaning. It is, on those occasions and in those immediate circumstances, plainly and simply forbidding or formidable. And if those occasions are frequent, we have a stable meaning we can reliably identify.

## 5. Conclusion

Design features often contribute to the constitution of even strictly semantic or conceptual meanings that design objects present. Despite the claims of a prevalent type of postmodernist thought, these and other meanings can be unequivocally the genuine meanings of the objects or relevant signifieds, truly expressing exactly what these objects or signifieds truly are. The architecture of Robert Venturi comprises a splendid, complex illustration of these claims.[1]

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# Design and the Modern Crib: Hygiene, Configuration, Materiality, and Social Status

GAL VENTURA

**Abstract:** Cradles and cribs, like beds in general, display cultural categories and discriminating values, mirroring socio-cultural settings, norms, and behaviors. While their essence is the material manifestation of a simple biological need, namely, to sleep in comfort and security, such "nonhumans," to borrow Bruno Latour's terminology, are designed to shape human actions and decisions while mediating human relationships. Through a detailed micro-history of a specific object, this article sheds light on the evolution of modern infants' beds, when the medicalization of sleep and the modern rules of hygiene altered traditional sleeping habits, insisting on children's secluded sleep in their own private rooms. As children became vital players in consumer culture, cradles, and cribs became segregating tools, striving to produce an object that would differentiate itself from its competition while concurrently distinguishing its users. Ranging in size, height, materials, colors, embellishments, and, most importantly, cost, infant beds became the most significant objects, demarcating the social status of young sleepers and their parents.

*Keywords:* Cradles, cribs, sleep, medicalization, babies, insomnia

> Tunisian cradles are hung on the wall […]. The Kabyle put their newborn babies in a simple wooden box […] In Russia […] the child is stretched out on a canvas fixed to a wooden frame without tension […] The Turkish cradle, for example, is a low, swinging cradle. [..] The Breton cradles are remarkable for their elegance and for the various ornaments that cover them (Dr Alfred Auvard and Dr Émile Pingat, 1889).[1]

Cradles and cribs, like beds in general, mirror socio-cultural settings, norms, and behaviors. While the essence of a bed is the material embodiment of a simple biological need, namely, to sleep in comfort and security, its design and usage articulate a multifaceted historical and cultural account. Like other commodities, cradles, too, belong to cultural categories and display discriminating values that mark their self-identity.[2] While poor babies often did not have a bed of any kind, recurring visual and textual evidence indicates that many others slept in particular beds intended exclusively for their own use.[3] Such "nonhumans," to borrow Bruno Latour's terminology, designed to shape human actions and decisions while mediating human relationships,[4] manifested the social rank of the family through their configuration, materiality, and aesthetics.

Considering the four players involved in the cradle's life – the object (the cradle); the manufacturer (doctors and designers); the users (primary users – the babies, as well as secondary users – the parents or caregivers); and the socio-cultural environment – one can understand the relative lack of design effort as it pertains to the cradle before the modern era. On the one hand, the cradle's primary users – the babies – were yet to be considered worthy of specially crafted objects, due to their exceptionally high mortality rate. The client was, therefore, not the baby, but its caregiver. Yet, since the majority of the population could not afford material objects designed for children, namely, they were "users" rather than "consumers," they preferred investing their meager resources else-

where. The nature of the users influenced the second component of this scheme, as the lack of a proper clientele did not produce specialized manufacturers. Accordingly, even though throughout history, some cradles were premeditated, as evident from paintings, engravings, and illuminated manuscripts,[5] many cradles were improvised from objects that the baby's caregivers found lying around the house. Wicker baskets, old wooden boxes, or timeworn chests were often chosen for their suitability to the newly required functions of enabling babies' sleep while guaranteeing monitoring of their movements and keeping them safe.

Initially, the cradle's basic purpose, as well as its configuration and small proportions, was intended to generate steadiness and security, while enabling safety, supervision, and easy access. Yet, at the same time, many cradles had a twofold movement; the "outer mobility" enabled parents to relocate the cradle at their wish, whereas the "inner mobility" – manifested through the etymology of the French word for "cradle," *berceau* – enabled caregivers to rock (*bercer*) their baby to sleep. Although these modules were initially meant to address the primary user – the baby – both kinds of mobility reflected the agency of the secondary users – the caregivers – and their active role with regard to the baby's sleep, while mirroring the transitiveness and marginality of babies in the household prior to the last decades of the eighteenth century.[6] Lacking a place of their own, they spent most of their time in a spatial infantile enclave, in the only place designated especially for them – the cradle.

During the nineteenth century, however, the growing medicalization of babies' sleep shaped the mass market of children's beds, yielding new configurations, structures, materials, and technologies. The flourishing of the cradle market in the last quarter of the century changed the demands of the secondary users. While the previous generation of cradles and bassinets were mainly valued for their accessibility – namely, an object that is available and inexpensive – in the fin-de-siècle competitive capitalist market, parents aspired for functionality, hygiene, safety, and comfort. Nonetheless, they simultaneously looked for diversity and style as a means of mirroring their babies' gender and social status through the cradle's configuration, materiality, and technology.

Through a detailed micro-history of a specific object, this article sheds light on the evolution of modern infants' beds, when the medicalization of sleep and the modern rules of hygiene altered traditional sleeping habits, insisting on children's secluded sleep in their own private rooms.[7] As children became key players in consumer culture, cradles and cribs became segregating tools, striving to produce a unique object that would stand out from its competitors, while concurrently distinguishing its users. Ranging in size, height, materials, colors, embellishments, and, most importantly, cost, infant beds became the most significant objects demarcating the social status of young sleepers, as well as of their parents.

### Children's Beds

Until the first decades of the nineteenth century, physicians perceived babies' sleep as a natural phenomenon that should hardly be governed, as babies slept per their needs. "When one has complied with the wishes of nature," wrote Alphonse Louis Leroy, a French surgeon from the medical faculty in Paris in 1803, "the child is quiet and sleeps almost continuously, especially if he enjoys his mother's nourishing warmth."[8] During the second half of the nineteenth century, however, this conviction came gradually to be replaced by a new conception, and babies were expected to sleep in their own specially bedded cradle, at specific intervals, in specific postures, and wearing appropriate garments. Unlike their predecessors, who argued that sleep "follows the laws of nature,"[9] late-nineteenth-century Hygienists – who were dedicated to the science of health – maintained that "sleep obeys the laws of habit."[10]

In this vein, the Parisian pediatrician Alfred Donné, one of the most articulate exponents of the medicalization of childcare, argued that "what our age wants is neither zeal, goodwill, nor maternal devotion, but good guidance."[11] Suggesting that a mother "would often ask for nothing better than to sacrifice herself," he wrote that she must, however, teach her children "to sleep continuously, for

a fixed period of time, and without waking too often."[12] Decades before the contemporary 'cry-it-out' method, which involves sleep-training children to self-soothe by allowing them to cry for a predetermined amount of time before receiving external comfort,[13] Donné raised similar ideas. "It is enough to be determined upon it," he asserted, "and to proceed in a clear and precise manner."[14]

As the need for order was imperative in an industrialized and capitalist society, governed by a world of work, progress, and productivity, 'unruly' sleep patterns were marginalized, paving the way for fixed sleeping routines aimed at achieving regularity and orderliness.[15] In modern, urban society, babies' sleeplessness became a potential problem that could jeopardize the well-being of the entire family. Consequently, the alleged "naturalness" of sleep became "de-naturalized" through medical guidance, which offered a long list of disciplinary guidelines that were eventually destined to "re-naturalize" infants' sleep through hygienic instructions. Instead of embracing the former ideal of babies sleeping when and where they desired, nearly all of Donné's successors published elaborate rules regarding the sanitation of the sleeping environment, including the baby's room, bed, bed-clothes, mattress, and pillow, the room's temperature, recommended amounts of air, light, and noise, preferred postures, and sleeping garments.[16]

"In the past," wrote Édouard Le Barillier, chief physician of the children's hospital in Bordeaux in 1860, "children were put to sleep by rocking them."[17] Even though this habit was repeatedly criticized by late eighteenth-century doctors, who charged that it caused babies dizziness and vertigo,[18] he maintained that its harm lies elsewhere, as "it is a bad habit that becomes hard to break."[19] "When a child cries, one must look for the cause," wrote Dr. François Barjon on this subject. Some babies cry because they are hungry, too hot, or too cold; others, however, cry because they have the habit of falling asleep in the arms of their caregivers, instead of in the cradle. "I repeat," insisted Barjon, "do not accustom him to being rocked and lulled to sleep only with songs or in the silent presence of others. The baby must fall asleep alone."[20]
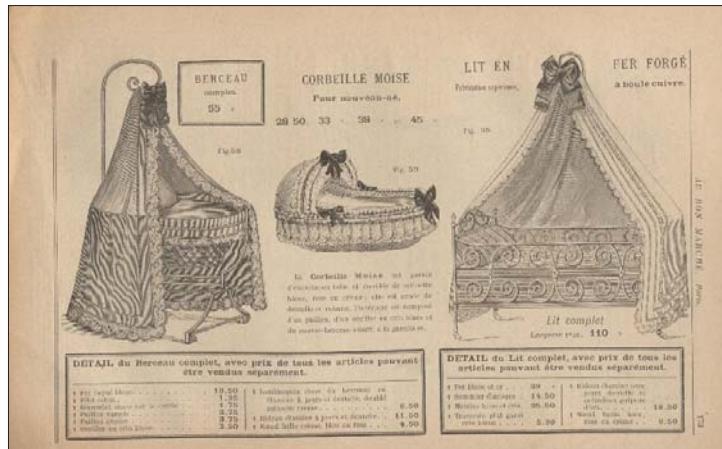


**Fig. 1.** *Au Bon Marché, nouveautés, maison Aristide Boucicaut*, catalogue général, été 1892 (Paris, 1892), 173. Paris, Bibliothèque Nationale de France (print in the public domain; photograph provided by gallica.bnf.fr / Bibliothèque nationale de France).

Though advice manuals often reflect ideal practices and not necessarily reality, the implementation of medical advice in French culture coincided with the world of mass consumerism, as beddings, night garments (*robe de nuit*), and innovative types of children's beds were sold at various prices in all the department stores (see, for example, fig. 1).[21] The latter gained extreme popularity in the child-oriented industry. Unlike eighteenth-century cradles, designated for all babies, from their first day of life "until the time when they start to walk,"[22] the combination of the medicalization of sleep and

the growing commodification of infancy led to the development of numerous specific products, designed for every phase of childhood, even the earliest ones.

Based on visual and material data, nineteenth-century infants' beds may be divided into four main categories: portable bassinets (basket-like containers), rockable cradles, immobile cribs, and toddler beds. The first category of footless, small-scale bassinets is appropriate for newborns before they can roll over, which generally happens between three to four months (see, for example, fig. 1, no. 59). Cradles, on the other hand, which are typically designed to produce movement through the addition of skate-feet or suspended baskets, are meant to be used by infants until they are capable of pushing themselves up on their hands and knees, generally between the ages of five to six months (see, for example, fig. 2). Cribs – which gained extreme popularity during the second half of the nineteenth century – are intended for toddlers until they can climb out, between eighteen to twenty-four months (fig. 1, no. 58). According to commercial catalogues, their length, ranging from 110 to 120 centimeters, was adjusted for toddlers, whereas their height, ranging from 190 to 210 centimeters, enabled the caregivers to attend to their child's needs efficiently. Finally, children's beds (*lit d'enfant*) were manufactured for older children until they reached adulthood (fig. 1, no. 55). While these objects varied in height (78 to 90 centimeters), their width (61 centimeters) and length (130 to 140 centimeters) guaranteed accessibility and comfort for both children and their parents.



**Fig. 2.** Jean-François Millet, *Baby's Slumber* (*Le sommeil de l'enfant*), ca. 1855, oil on canvas, 46.4 x 37.5 cm. Norfolk, VA, Chrysler Museum of Art, gift of Walter P. Chrysler, Jr. 71.517 (artwork in the public domain; photograph provided by the Chrysler Museum of Art).

### Cradles versus Cribs

Even though Leroy suggested in 1803 "using a small box of very thin wood, or a small cradle of wicker, made in the shape of a bucket,"[23] late-nineteenth-century pediatricians strictly prohibited such devices, maintaining that the crib should have " a more serious superiority," as "it is immobile and stable and consequently does not lend itself to rocking."[24] In an advisory column published in the monthly journal *La Jeune mère*, issued from 1873 to 1905, Dr Félix Bremond articulated similar guidelines:

The crib must, whatever its wealth or its poverty, entail an open-wire basket, never an impenetrable box. Mothers can therefore give free rein to their fantasy in this regard, choose walnut, mahogany, or rosewood, prefer silk nets or metal networks; the significant thing is that they make the baby a latticed nest and not a compact one. An airtight box is worth nothing for the infant.[25]



**Fig. 3.** André-Théodore Brochard (MD), "Le berceau," *La jeune mère ou l'éducation du premier âge* 1, no. 1 (November 1873), 8. Paris, Bibliothèque Nationale de France (print in the public domain; photograph provided by gallica.bnf.fr / Bibliothèque nationale de France).

The widespread opposition to the traditional footless wooden cradles was based on several impending perils related to their location, height, and materiality. "Placed on a piece of furniture, they expose the child to fatal falls," wrote the renowned Parisian pediatrician André-Théodore Brochard, a member of the *Sociétés protectrices de l'enfance*, which aimed to reduce child mortality rates by teaching mothers the hygiene of childhood,[26] in the first issue of *La Jeune mère*. Put on the floor, "these cradles expose newborns to the action of humidity and the awaiting of pets. […] I have rarely gone to nurses with such cradles, without finding chickens and their chicks pecking at the outfit or the figure of an infant, to grab the breadcrumbs that could be found there."[27] To further convince his female readers that such hazards "are by no means imaginary," Brochard cited a regretful incident reported in the newspaper that had occurred in Brittany. After a local mother left her three-month-old baby in his low-based cradle for a minute, "his cries called her home, where, upon arriving, she found a pig occupied in devouring the child. The lower part of its face has disappeared." By adding an image of the most desirable hygienic crib, Brochard further promoted such recommendations (fig. 3). Located next to the mother's bed, to facilitate maternal care after delivery, this oval-shaped metal bassinet "complies with the rules of hygiene," as "it is clean, light, tall enough to reach inside, and positioned on solid feet."[28] In view of the miasma doctrine that maintained that noxious fumes filled the air below knee level,[29] Brochard and his colleagues insisted that babies' cribs must be positioned on solid feet, "at height enough to reach."[30] Elevated above ground, they guaranteed fresh air and facilitated parental care, without "being overturned by the tremors which are impressed upon it by the comings and goings of people of the entourage."[31]

Lastly, pediatricians' opposition to the use of low-based cradles was also related to their materiality. Even though Bremond and his contemporaries ostensibly approved of a variety of materials for

babies' cradles, so long as they are elevated above the ground, in fact, compacted wooden cradles were utterly prohibited by all doctors, as they "can be impregnated with bad smells, be invaded by bedbugs, are too difficult to clean not to reject them absolutely."[32] As bedbugs, fleas, and lice left noticeable marks on babies' pale skin, they were not only a sign of maternal negligence but also denoted bad hygiene, both physical and moral.[33]



**Fig. 4.** Honoré Daumier, *Behold the moment (after midnight) when calm and peace truly reign in happy homes. Better late than never* (*Crie donc, Voilà le moment (passé minuit), où le calme et la paix règnent véritablement dans les heureux ménages. Vaut mieux tard que jamais*), from the series *Married Life (Mœurs conjugales)*, pl. 29, published in Le charivari 9, no. 528 (22 November 1840) lithography, 23 x 25.2 cm. Paris, Bibliothèque Nationale de France, Cabinet des Estampes et de la photographie (artwork in the public domain; photograph provided by gallica.bnf.fr / Bibliothèque nationale de France).

Regardless of such potential hazards, small-scaled, sturdy wooden cradles with low horizontal proportions remained popular in rural France until the beginning of the twentieth century (see, for example, fig. 2). Since the ongoing popularity of wooden cradles among the peasantry mainly stemmed from their mobility and low price, pediatricians regularly contended that the wooden cradles "must be replaced everywhere by a modest wicker cradle, posed on solid feet."[34] Given their low cost and durability, low maintenance, and stylistic adaptability, wicker cradles became extremely popular among the urban merchants and members of the petty bourgeoisie (see, for example, fig. 4).[35] Whereas wooden cradles were made by rural carpenters (*menuisiers*), who were mainly in charge of simple, everyday woodworking,[36] wicker bassinets were sold in the *Grands Magasins*, available to all for a modest price.[37] Unrockable, and mounted on high feet, they followed the doctors' orders perfectly.

Even though the higher classes used similar elevated devices, they favored cribs made of polished wood,[38] or preferably, those made of iron.[39] The inclination to iron, repeatedly recommended by pediatricians in the last decades of the century, stemmed from reasons of hygiene, as metal beds prevented infestations of bedbugs, lice, and moths.[40] Being "as precious as they are healthy and comfortable,"[41] metal cribs, which appeared in artworks, fashion magazines, and childcare manuals, gained popularity among the bourgeoisie, as they conflated the doctors' insistence on paramount sanitation with maternal aspiration for stylishness.[42] Such items reflected the growing importance of infants as individuals worthy of their own material goods and private space. Unlike babies, who slept

in their mother's room, older children were expected to sleep alone. "It is advised that as soon as possible, each child should have his own little room," wrote architect Émile Cardon in this vein in 1884. In such private spaces "they get into the habit of order by putting aside and caring for what belongs to them – their toys, their books, and their pictures."[43] Children's private bedrooms were not only meant to accustom them to privacy and independence, but also to acculturate them to the laws of physical and moral hygiene.[44]

According to Zygmunt Bauman's analysis of modernity, in past centuries immobility signified higher social status, whereas nomadic mobility characterized the lower classes, lacking a place of their own.[45] The elevated, immobile crib testifies to the veracity of this statement. Whereas the bassinets of the underprivileged – often relocated in accordance with the caregiver's needs – imprisoned them in a restricted provisional location, cribs offered a comfortable, stationary territory of experiences. Subsequently, the higher a late-nineteenth-century cradle, the higher the social status of its occupant.

### Sleep *à la mode*: Social Status and Gender

The association between metal cribs and social standing is clearly demonstrated by the baby's immobile, elevated metal crib portrayed by August Toulmouche in 1858 (fig. 5), which is so different from the wooden cradles occupied by babies from the lower classes (fig. 2). Comprising a mesh basket, padded with a mattress and a large lace pillow, it combines beauty, elegance, stability, and extreme cleanliness. While complying with medical recommendations, the pink trim on the baby's blanket denotes her female gender, thus underscoring her individuality.



**Fig. 5.** Auguste Toulmouche, *The Prayer* (*La prière*), 1858, oil on canvas, 73.7 x 59.1 cm. Private collection. (artwork in the public domain; photograph published under fair use).

As childhood grew in importance in the mass market of the mid-nineteenth century, fashion magazines began to contend that blue denotes masculinity and pink signifies femininity.[46] This custom was already described in a manual for housewives published in 1834 by Élisabeth Celnart, a French writer who published numerous books for young girls and women. In a chapter dedicated to baby clothes she maintained that it is quite common to add "pink satin in the case of a little girl, and blue satin if it is a boy."[47] Such customs were very common among all classes during the christening

ceremony, as suggested in a manual on good manners published in 1859: "These caps can be entirely white. Otherwise, pink is compulsory for a girl, and blue is compulsory for a boy."[48] The same differentiation was applied to ornaments added to cribs and bassinets. In a short essay published in the fashion journal *La mode illustrée* in 1867, the editor explained the best way to decorate a cradle: "If we wish to make this cradle very elegant, we will decorate it with taffeta, or pink or blue silk, and we will cover this lining with embroidered muslin, or by applying embroidered tulle meshes, beehives, and rosettes in pink or blue ribbon."[49]

Following Walter Benjamin, who maintained that commodities generated a "phantasmagoria of equality,"[50] Art historian Greg Thomas argues that the prominent market for children's clothing helped commodify children themselves as symbolic capital visualizing the affluence and status of their parents and families.[51] The veracity of this statement is mirrored in Georges Bertall's trilogy *La Comédie de notre temps* (i.e., the comedy of our times), published in 1874. Given that "the coquetry of the mother awakens" in favor of her newborn baby, "it is the moment for running quaveringly and eagerly to all the stores when we find the M*agasins du Louvre* too small, or we overturn a squad of clerks to discover suitable swaddling clothes [...]. The dear little darling barely appeared, and his outfit and costume already classified him. Not to mention the exceptional babies who find the *légion d'honneur* in their cradle."[52] Throughout the century the growing stylishness of babies' sleep among the middle and upper classes was supported by the world of mass production, which was largely controlled by the women of the period, who took an active part in it as producers, consumers, and sellers. This trend intensified in the last decades of the century, as shopping itself became a new feminine leisure activity and department stores became a self-enclosed feminine microcosm.[53] Consequently, though generally following pediatric recommendations, mothers found ways to express their own tastes while signifying their babies' individuality.

In his treatise on home decor, Cardon urged mothers to accustom their children to elegance and beauty. As "Talking to the eyes is the most powerful of all means of instruction […] we must only surround ourselves with noble and decent objects, to ensure that for our children, raised in this environment, this love of the beautiful become second nature."[54] Accordingly, "all that is destined for the use of children must be distinguished by the purity of the form. The 'whatever, it is good enough for a child,' is a mistake. You do not let him read a bad book, don't show him nasty things; accustom him to beauty."[55] Doctors, who acknowledged these customs, did not oppose "the decoration of these small beds with a light fabric in pink, white or blue," yet they maintained that "this garnish must be renewed often," fearing that "Unfortunately, this ordinance is forgotten more than once."[56] Accordingly, though mothers generally followed the pediatricians' endorsements, they found ways of expressing their own tastes, while signifying their baby's individuality and gender.

In addition to special beddings, all the department stores exhibited a vast assortment of bassinets and cribs at a variety of prices. A rather simple wooden crib, "walnut color, Greek tulle curtains, hand embroidery, double sateen, padded with satin interior and silk strings, complete bedding with a knot," cost 155 francs.[57] For an additional fee, one could acquire the same crib tinted in white, whereas other more sophisticated infant beds cost between 250 and 315 Francs. Since the average daily wages for the working classes in the last decades of the century did not exceed five or six Francs,[58] such a crib was roughly equivalent to a worker's monthly salary. Obviously, then, such cribs were meant for a bourgeois, affluent clientele, who enjoyed the benefit of spacious households and valued fashion and style.

Nonetheless, in the last decade of the century, after successfully converting crude iron into steel that lowered their price, metal cribs were mass-marketed, gaining popularity among the middle and lower classes all over Europe.[59] Elevated on metal feet and adorned with white curtains, such cribs, sold in the department stores for twelve to fourteen francs, offered a proper, medicalized sleep to the young members of the underprivileged sectors of society.[60] As sleep was long declared to be one of the most crucial needs of young babies for their physical and moral development, such devices

democratized, to a certain extent, infants' sleep, by offering the best possible sleeping environment to the young members of the working class.

Given that metal cribs became accessible to nearly everyone, the *Grands Magasins* offered expensive novelties for the affluent classes. As the appetite for luxury grew among the rapidly expanding bourgeoisie, most manufacturers substituted the previously accepted practice of custom-made furniture, favored by the nobility, with what could be called "shop method," which enabled them to exhibit their designs regularly in all the major department stores. The most notorious crib designer in *fin-de-siècle* France was the Viennese cabinetmaker, Michael Thonet. By mid-century, he had perfected a process by which solid wood rods could be steam-bent into complex curves, creating a cheaper, lighter, and more durable material than the traditional wood-carving techniques (fig. 6). Due to this process, he could make furniture from a small number of long, flowing, curved pieces of wood, while eliminating much of the prior necessary joinery. After installing special machinery for mass production in his factory in 1856, he exported numerous furniture items all over Europe and the United States.[61] Unlike early nineteenth-century elevated cradles, made of an oval bassinet suspended on wooden poles, specially designed to be rocked,[62] Thonet's cribs, sold in Paris at Boulevard Sebastopol, 92,[62] were immobile. Elevated on decorated legs in the Art Nouveau style, with a prominent curved swan-neck pillar supporting the veil, such cribs blended style, utility, and hygiene.



**Fig. 6.** Michael Thonet, *Cradle*, ca. 1895, bentwood, height: 208 cm, length: 150 cm, depth: 70 cm. Private collection (artwork in the public domain; photograph published under fair use).

John Dunnigan argues that, in Thonet's furniture, "form and function were one."[64] Indeed, his stylish cradles mirrored medical endorsements perfectly, while offering numerous benefits for both the baby and its mother. Their four steady legs assured the baby's safety; the bassinet's height enabled easy access for the baby's caregiver; and their light, ventilated containers, so suitable for the basket's added ornaments, facilitated the frequent changing of bedclothes. Since doctors maintained that "Children must be softly laid down because of the delicacy of their limbs," the cradle's wooden frame was "padded and quilted at the edges, so that they cannot harm themselves in their movements."[65] In addition to the mattress, bedding, and blankets, the cradle's unique frame facilitated the adjustment of an embroidered, gender-appropriate mantling, as suggested in the women's magazines.[66] Due to the combination of the Art Nouveau elegance of Thonet's cradles with their ample compliance with the rules of hygiene, numerous copies – mostly unauthorized – soon invaded the market and were

sold in department stores, such as the *Bon Marché*. A rather simple wooden crib, "walnut color, Greek tulle curtains, hand embroidery, double sateen, padded with satin interior and silk strings, complete bedding with a knot,"[67] cost 155 francs (fig. 7, no. 54684, on the upper left), whereas other, more sophisticated cribs, were sold for 250 to 315 francs (fig. 7, on the right).



**Fig. 7.** *Au bon marché, maison A. Boucicaut, album des layettes*, catalogue (Paris, 1907), 36. Paris, Bibliothèque Nationale de France (print in the public domain; photograph provided by gallica.bnf.fr / Bibliothèque nationale de France).

Concurrently, however, *Au Bon Marché* and *Le Grands Magasins du Printemps* offered simpler, immobile rectangular infant beds, made of steel or wood, erected on four steady feet, which became popular at the beginning of the twentieth century (see, for example, fig. 1 on the right). Such elevated, fenced infant beds not only complied with medical recommendations but also suited both users, as the dimensions are clearly predestined for a baby, whereas the height facilitates the caregiver's attendance. Nonetheless, many babies from the middle and upper classes had more than one bed and were occasionally placed in a rounded small-scale bassinet (fig. 1 in the middle). Interestingly, the use of such items, which flourished during the last decades of the century, enjoyed the pediatricians' endorsement, despite their strict petitions to use elevated cradles that protect the baby from humidity, pets, and potential falls.[68]

### Demand and Supply: Physicians in the Market

Even though pediatricians vastly recommended metal cribs in light of their hygienic qualities, portable bassinets gained popularity among the middle and upper classes during the last decades of the century. Accordingly, the *Grands Magasins* offered a variety of small-scaled bassinets designed for early childhood (see, for example, fig. 7 on the bottom).[69] Along with low-cost octagonal wicker bassinets, specially designed to hold warm-water bottles, for the winter,[70] one of the bestsellers in this category was the "*Berceau Moïse*" (i.e., Moses basket).

In a fashion column published in *La Jeune mère* in 1886, Renée d'Ans contended that the *Moïse* is "As necessary as the large cradle," as it is "more attractive, more practical, and indispensable on many occasions." Due to its small dimensions, it could easily be moved around the house, allowing the mother "to transport the sleeping child wherever she wishes." Of no less importance, however, such devices "adorn the baby's room," looking like "real jewelry, an indescribable jumble of crumpled attractiveness, charming, soft nests, in which the sleeping child looks like a rose votive in a case."[71]

"When a baby is very young, that is in the first months of his life, he cannot always be left in its cradle, relegated to the back of the nursery," wrote Colette Salignac in a similar vein in a fashion column published in *La Jeune mère*. As the young mother is only too proud to introduce the new member of the family to all of her acquaintances, she carries it in her arms, passing it from one to another to admire its delightfulness. "However, nothing is worse for a very young child than being tossed about without support from right to left." Therefore, when transporting the child "from the nursery to the living room," or "from the arms of the grandfather to the knees of the grandmother," the *Moïse* is the most practical solution, "clean, comfortable, light and which can be as charming as desired."[72]

While mentioning the *Moïse*'s practicality, d'Ans and Salignac emphasized its desirability and moderate price. Whereas such bassinets were sold in every department store for a variety of prices, ranging from 28 to 75 francs (see, for example, fig. 1 in the middle), in a later column, Salignac gave specific instructions for mothers who wished to create the *Moïse* themselves. "All the mothers have seen these lovely baskets at the seamstress and in the new department stores, wrapped in pink and blue, embellished with lace, which, despite their title, are only reminiscent of the basket coated with bitumen and pitch that was deposited on the banks of the Nile," she wrote. Some fortunate mothers hastened to buy "this charming trinket"; others, less wealthy or more frugal, decided that the common cradle would suffice, and walked away with a sigh, "thinking that the expected baby would, however, be very cute in the midst of all these frenzies." Yet, "it is so convenient! In winter, the child is placed in front of the fire in the middle of the nursery room, in summer, the child is carried in the garden under the branches that temper the sun's rays." As nothing is easier than fabricating such an item, Salignac described in detail the exact way of making it at home. "The expense is so minimal that the most economical will do it without difficulty."[73]

In light of the rising maternal interest in such bassinets, during the last two decades of the century, nearly every pediatrician endorsed the *Moïse*, stressing its advantages. "There is only one harmless way to make an infant travel by train," wrote Brochard in 1880, "it is to put it in a small *berceau Moïse* […] which I have mentioned several times in this newspaper […]. In it, the child is not subjected to any violent movement."[74]

Unlike the growing inclination toward simple, modest toys,[75] the popularity of the *Moïse* was a direct outcome of the marketing enterprise, stressing variety and multiplicity. As infants' sleep became a consumer product, fashioned by doctors, and consumed by mothers who could procure it, pediatricians were only too eager to join the market by exploring, endorsing, and expanding the variety of recommended sleeping instruments. Although such objects were designed for the benefit of the primary users – the babies – it was, in fact, the growing concern for the satisfaction of the secondary users – the parents – that spurred the physicians' involvement in the cradle industry during the last decades of the century.

In 1887, a vast number of portable bassinets were introduced at the Childhood Hygiene Exhibition held in Paris. Following a two-and-a-half-hour visit to the display, where the kiosk of *La Jeune mère,* "surrounded by mothers," distributed gifts, Dr Toussaint published an enthusiastic account. "All the readers of this newspaper who live in Paris have certainly visited the *Exposition d'Hygiène de l'Enfance*," he wrote. While attending the lectures of the hygienists and physicians, the mothers "surely discovered a host of useful or pleasant objects and products." Among the endless variety of toys, feeding bottles, bedding, and clothing for children from birth to the age of twelve, "the public ran the risk […] of falling asleep in front of the endless series of children's cradles," which included a vast number of "charming beds" and "rubber mattresses." In addition to the *Moïse*, made of wicker to prevent bedbugs, the good doctor was especially enthusiastic to discover the "cradle-hammock" (*berceau-hamac*), "invented by Madame Léon Béquet, the devoted founder of *la Société d'allaitement maternelle*. It is hung with four nails above the mother's bed, who has only one movement to make to take the child."[76] Although similar devices were described by doctors who discussed the different ways in which babies previously slept around the world,[77] virtually all of them stressed the strict

necessity to avoid low-based devices due to the exposure to humidity, the risk of falls, or pet bites. Nonetheless, given such overall maternal enthusiasm, they submitted to the public's demands.



**Fig. 8.** *Au Printemps, Paris, ameublements de campagne et de jardin, ménage, porcelaines, catalogue commercial* (Paris, 1910), 52. Paris, Bibliothèque Nationale de France (print in the public domain; photograph provided by gallica.bnf.fr / Bibliothèque nationale de France).

In his book *The Social Life of Things*, Arjun Appadurai argues that objects are born from the very yearning for them and that it is cultural desire and demand that brings about their realization, by pushing for new technologies in response to those needs. Suppressing the tyranny of the economic dimension, he argued that the cultural-political act precedes the economic act and that it is the lust for luxury that drives capitalist commerce, rather than vice versa.[78] By implication, it may be stated that the manufacture of the *Moïse*, like other low-scale bassinets, stemmed from the bourgeois women's own needs, as such devices enabled mothers to watch their babies while moving freely around the house. Consequently, women's economic power as consumers eventually contributed to the development of pseudo-medical devices, which enabled them to fulfil the pediatricians' demands and continually observe their babies without giving up leisure and other desirable activities. Portable beds, such as Béquet's hammock, produced *by* mothers *for* mothers, enabled them to avoid endlessly sitting next to the cradle by allowing them to move the baby around at will, as stated by d'Ans.

Consequently, during the last decades of the century, several physicians and engineers developed and endorsed new mobile sleeping instruments. Along with foldable cribs (fig. 8, no. 29727) or "travel cradles" (*berceau de voyage*, fig. 8, no. 29728), the renowned Parisian pediatrician Eugène Bouchut suggested using a baby hammock, based on his own creation, consisting of an iron frame and a piece of canvas (fig. 9). "This hammock frame can be an excellent daybed for young children," he wrote. Nonetheless, he maintained that it could only be used during summer days. "During the day, because we will be able to monitor their movements and prevent their falls; during the summer,

on account of the air circulating freely around the child's body, will give it a healthy freshness. It is a luxury bed that is not worth our ordinary means."[79]
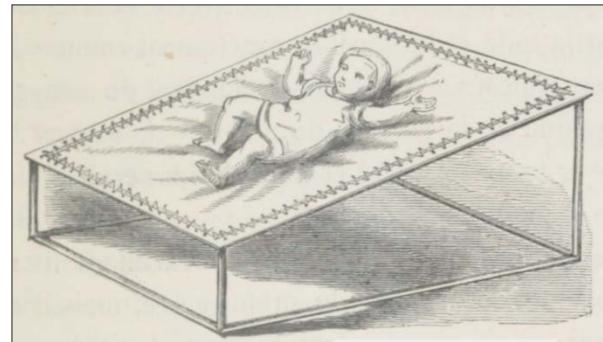


**Fig. 9.** Eugène Bouchut (MD), "Cadre-hamac pour enfants," Hy*giène de la première enfance: guide des mères pour l'allaitement le sevrage et le choix de la nourrice chez les nouveau*-nés, fifth edition (Paris: Baillière, 1874), 287. Paris, Bibliothèque Nationale de France, Cabinet des Estampes, Paris (print in the public domain; photograph provided by gallica.bnf.fr / Bibliothèque nationale de France).

Whether or not this baby hammock was mainly designated for the convenience of the secondary user, other sleeping devices were chiefly manufactured to address potential accidents and health issues experienced by the primary user. In a column published by Brochard regarding potential cradle-based accidents, he warned parents about falls, which may occur when the child starts to roll over, proposing to cover the cradle with a mesh net.[80] Indeed, in 1870, the Parisian engineer Jules Émile Boivin issued a patent for an ingenious "parachute-cradle" (*berceau-parachute*, fig. 10).[81]



**Fig. 10.** "Berceaux-parachute," *Album illustré de l'almanach Didot-Bottin, annuaire de la fabrique et de l'industrie* (Paris: J. E. Bovin, 1877), n.p. Paris, Bibliothèque Nationale de France (artwork in the public domain; photograph published under fair use).

After receiving a bronze medal and an honorary mention at two industrial exhibitions held in Brussels in 1873 and 1876, the new device was praised by the Parisian critics of the Exposition Universelle of 1878. "Let us quote an infinitely graceful piece of furniture," wrote one of the critics,

stressing that it is not only charming but also most useful. "A net supported by metal wires, displaying the spheroid shape, completely envelops the cradle. The child can play, do whatever he likes, there is no fear that he will fall; the net also serves as a mosquito net and prevents flies and other insects from tormenting the baby."[82]

Even though several doctors did not share his enthusiasm,[83] Brochard argued that Boivin "perfected" his own idea and "even simplified it." This invention, he maintained, "offers young mothers all the security possible, either when the infant sleeps, or when he plays while awake." To further convince his female readers, he added an illustration of this ingenious device, as "the child is perfectly enclosed while having at his disposal both air and light in the required quantity." Claiming that it can be especially useful when children start standing in their cradles, he added: "I know very well that a large number of mothers will respond by saying that they do not leave their infant for a single instant, that they are always with him. Maternal love, in fact, is the best guardian of the child."[84]

During the last decades of the century, several physicians developed additional sleeping devices that addressed health problems while reflecting the rules of hygiene. Already in 1857, Jean-Louis-Paul Denucé, an obstetrician from Bordeaux, invented the "incubator cradle" (*berceau incubateur*),[85] "intended for children born before term, for which a soft and constant heat is essential."[86] This medical instrument maintained stable conditions in a germ-free environment for premature infants born before the thirty-seventh week of gestation. In the early 1880s, Dr Étienne Tarnier, one of the most renowned pediatricians of the period, perfected this device, constructing an improved model that could hold up to four infants at once, consisting of a thick glass lid and a wooden box frame with sawdust-insulated walls that could radiate heat. As the incubator was placed upon a water tank heated with gas or alcohol, it was warmed through the air circulation from the bottom through vents above the infants. This modified model became increasingly popular in Parisian maternity wards during the 1890s and was responsible for a 28% decrease in infant mortality over a three-year period at the *Hôpital Maternité* in Paris.[87]



Fig. 10. — PÈSE-BÉBÉ DU DOCTEUR GROUSSIN.

**Fig. 11.** Alexis Clerc (MD), "Le berceau pèse-bébé du docteur Groussin" (a weighing-babies-cradle), *Hygiène et médecine des deux sexes; suivies d'un Dictionnaire d'hygiène et de médecine* 1 (Paris: Jules Rouff et Cie, 1885), 125. Paris, Bibliothèque Nationale de France (print in the public domain; photograph provided by gallica.bnf.fr / Bibliothèque nationale de France).

Another chiefly medical device was introduced by Lucien Groussin, who developed the "baby-scale cradle" (*berceau pèse-bébé*), endorsed by several pediatricians (fig. 11).[88] In his 1874 manual, Bouchut explained the need for such an item:

> in general, newborn children lose 30 to 300 grams on the first day; this can continue again on the second day and the following days, but in general, the weight rises again from the third day of birth. Mothers must therefore follow the increase in weight of their child with attention, and to do so, weigh them approximately every eight days, with a very exact balance or in the cradle of Groussin.[89]

The doctors' determination to regulate the world of early infancy through a long list of pros and cons significantly diminished parental agency. Under the auspices of *Puericulture* (the care of newborns), doctors recommended the repetitive use of precise, systematic techniques for handling babies. In addition to regular pediatrician visits, mothers were expected to punctiliously follow their instructions with regard to sleeping, feeding, washing, dressing, promenading, and vaccinating.[90] The meticulous charts endorsed by physicians, measuring the newborns' estimated height and weight, in relation to their age, further pronounced the superiority of the "scientific" over the "natural."

In an article dedicated to incubators, Gina Greene argues that while this novel instrument represented the emergence of a new kind of therapeutic space, designed to emphasize transparency and hygiene, it actually separated the mother and child and interposed the physician as a mediator necessary for ensuring the child's well-being.[91] In like manner, by introducing mechanisms of medical administration through the recording of data and statistics, pediatricians contributed to the establishment of a "society of norm," whose sickness – and health – are governed by the medical establishment.[92] Instead of allowing babies to sleep as per their own needs, late-nineteenth-century doctors prescribed specific rules, which determined the exact quantity and period of sleep required by each child according to its age. Consequently, by the end of the century, the subjective examination of bodily functions was replaced by charts and diagrams.[93] Instead of relying on the baby's behavior (crying, bowel movements, sleep, and mood), the new narrative accentuated measurable parameters (weight, height, liquid quantities) to track the baby's growth and well-being. Rather than focusing on the baby, parents now determine its welfare based on the doctor's declaration.

The elevated hygienic crib mirrors similar ideas. Even though it represents children's growing autonomy in the household, it simultaneously mirrors the vast impact of the medicalization process on everyday life, shaping human action and decisions while shifting from serving as mediators to acting as intermediaries.

### The (In)Capacity to Sleep Alone

Latour argues that no matter how important objects may be, they tend to recede into the background, "and the greater their importance, the faster they disappear."[94] The evolution of the modern crib testifies to the veracity of this statement. After being "de-naturalized" through medical guidance, which negated prevalent sleeping methods, insisting on children's secluded sleep in their own beds, the crib became "naturalized," conventional, and customary. Its commonness nearly made it imperceptible in historical research, as well as in real life. Albeit signifying homeliness, intimacy, and privacy, the crib denotes the doctors' insistence on the laws of hygiene, which purportedly presented ways of purification *for* the child's body, and eventually sterilized *the* body itself, while replacing, to a certain extent, human warmth with a sanitized, solitary sleeping environment.

It is little wonder, then, that in recent years the practice of co-sleeping gradually gained parental recognition. The idea "that babies can and *should* learn to 'self-soothe,' without any physical or emotional interaction with parents, is incorrect," writes Dr Paul Fleiss in this respect. Depriving a baby or a child of emotional support "runs the risk of creating an emotionally unstable child and eventually an emotionally unstable adult."[95] Unlike the 'cry-it-out' method, based on the principles of nineteenth-century hygiene, such views embrace the sanctions of eighteenth-century pediatricians, who emphasized the significance of bodily interaction between mother and baby.[96] "Mothers

whose opinions are not skewed by American sleep books and 'sleep experts' do not regard co-sleeping as optional. They believe it's the only natural thing to do," writes Dr William Sears, a well-known bed-sharing advocate. However, "just because it's nighttime, that doesn't mean my baby needs me any less."[97]

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## Notes

[1] Pierre-Victor Alfred Auvard (MD), and Émile Pingat (MD), "Hygiène infantile ancienne et moderne," *La Science française: revue populaire illustrée* 3, no. 157 (March 2, 1893): 38-40.

[2] For further discussion regarding commodities, see: Ian Woodward, *Understanding Material Culture* (Los Angeles: Sage, 2007), v-vii.

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# Design and Photography: Pinhole, Perpendicular, Programmatic

YANAI TOISTER

**Abstract:** This article advocates a transformative reevaluation of photographic discourse, redirecting its focus from visual aesthetics to the underlying programmatic principles initiating them. It explores photographic systems as a central concept in the oeuvres under scrutiny, uncovering a profound alignment with design philosophy that starkly contrasts with prevailing interpretations. This theoretical recalibration critically addresses the historical neglect of photographic apparatuses, asserting their indispensable influence across the annals of photographic history despite their notable absence in conventional narratives. Through analysis of the distinctive artistic oeuvres of Aïm Deüelle Lüski, Tuula Närhinen and Tamás Waliczky, the article illustrates the seamless interplay between photographic methods and speculative design, challenging the conventional metrics of photographic value. By advocating this shift, the article invites a comprehensive rethinking of photographic education and practice, urging an in-depth exploration of the conceptual frameworks that underpin the medium, thereby fostering a richer, more nuanced understanding of photography's essence and potential.

*Keywords:* Pinhole camera, apparatus, program, Vilém Flusser, Tuula Närhinen, Tamás Waliczky

**Design and Photography: Pinhole, Perpendicular, Programmatic**

For the critic and scholar of photography, the challenge traditionally posed in addressing the unique oeuvres of photographers has been primarily that of articulating the aesthetic, discursive or societal merits existing in and arising from photographic works. The challenge has rarely been to determine *what* a photographic work actually is (or might or should be). To this day, when addressing photographic works, we hardly ever think, speak, or write about anything *but* photographs (of sorts). Similarly, for most photographers, their work is only the photographs which they have produced themselves, or have otherwise been made available for viewing on their behalf. Nonetheless, as photographs and their derivative images have become ubiquitous in recent decades, it has become increasingly harder to attribute intention or worth to this or that singular photographic image (or quasi–photographic image[1]). Scholars have spoken of a ubiquity of photographs, a deluge, or flood (most explicitly: Hand, 2012; Parry and Lewis, 2021) and artists have celebrated this condition (Umbrico 2006). Under these conditions, it seems futile, if not impossible, to single out this or that image and to pronounce it as undeniably distinguishable from, let alone superior to, sibling-images. As in water, so too in contemporary photography, mass cannot easily be distinguished from its granular constituents.

This state of affairs does not mean all floods are identical, however. Nor does it imply that once photographic floods are streamed and streamlined, dammed or piped, we can remain indifferent to how they started flowing. Accordingly, this essay addresses photographic oeuvres (mostly but not necessarily by proclaimed artists) wherein time and much labour have been invested in initiating novel flows – photographic works whose image characteristics are secondary, if

not marginal to their genesis. While some of the photographers mentioned below might still produce images for viewing and presentation, these are arguably irrelevant outcomes. Rather, it is the photographic system, constellation or assemblage which yields the images which are the locus of the oeuvres concerned here. One point of departure for this challenge is Vilém Flusser's (2000, 76) construal of the photograph as 'an image created and distributed by photographic apparatus according to a program'. Contra Flusser, however, I explicate the terms apparatus and program to propose here that photography may be philosophized as a critical form of design, albeit one that is completely unacknowledged by its own designers.

To be clear, this undertaking is not about dusting off the 'is photography art?' question. The parameters of this age-old query and the conclusions drawn from it have never been useful. I am equally impartial to attempts to prove that some design is of artistic novelty or that all designs must be considered in artistic terms. Rather, I am interested in arguing that the best way to understand photography today, inasmuch as it might be art (which it clearly need not be), is as mass-*producing* art – a form whose apparatus-dependence necessitates questioning the reciprocal relationship between humans, their natural faculties and the objects and technologies they create. This is, coincidently, also the self-declared charter of speculative design (Dunne and Raby, 2013) which is similarly disinterested in products per-se. Put differently, photography's historical success lies not in *how* it appears and less in what it is *made of* (physically or chemically). Rather its success, and arguably its purpose, emerges from what it affords: processes of speculation, decision-making and recursive bifurcation. For example, the revelation of one optical unconcoiusness (Benjamin, 2008) affords the production of latent optical unconciousnesses necessarily waiting in loom. And such latencies, whether entirely-speculative or soon-to-be-emergent, in turn destabilize optical consciousness in the main. Similarly, if a given apparatus is programmed by a given program, that very same apparatus might have been, or is simultaneously being, programmed by another program which is concurrently programming, or has programmed, other apparatuses.

Clearly, when including the words design and photography in the same sentence, it is tempting for photo-scholars and photographers alike to hark back to one rudimentary technology: the pinhole camera – a simple camera obscura. Indeed, most camera obscura illustrations featured in the history of photography present a basic volumetric structure wherein one planar surface is punctured, light then flows through a hole, forming a traceable image on the opposite planar surface. The size and proportions of the structure (mostly a cube or box, although not necessarily) determine variables like focal length, image perspective or distortion and distribution and type of detail. This then is a right-of-passage exercise for budding photographers: design a pinhole camera and construct it yourself (be it from a shoebox, used coffee can, or the bedroom at your parents' home). Pinhole cameras remain popular amongst educators, but for most photographers this classroom exercise is where deliberate attempts at design end. From here on, only pre-designed and pre-existing cameras will be used. These may be purchased at the local thrift store or online, they may be fully mechanical or integrated with a computer, but they will always be the work of an agent other than the photographer. (Most usefully for unenthusiastic students, pre-punctured pinholes are nowadays sold online).

Vilém Flusser famously pondered the meaning of the term 'apparatus', as derived from the Latin verb *apparare* (to prepare). In his philosophy, photography is far more than a technological tool that naturally, mechanically, or automatically produces an image. Rather, it is a complete system which is wholly in place: 'The photographic apparatus lies in wait for photography; it sharpens its teeth in readiness. This readiness to spring into action on the part of apparatuses, their similarity to wild animals, is something to grasp hold of in the attempt to define the term etymologically' (Flusser, 2000, 21-2). But what does 'prepare' mean in this context? Contrary to and Joel Snyder and Neil Walsh Allen's advocacy of artful preparation of the image (1975,

as well as Snyder 1980) – choice of exposure variables, lens, film stock (or nowadays colour profile), etc. – for Flusser, the photographic image is almost without exceptions prepared *by the apparatus*, not the photographer. It is thus always already prepared, and the photographers' choices and actions, in fact their entire demeanour, are limited to engagement with that which has been pre-prepared.[2]

Some artist-photographers are known to have used a pinhole camera at some point in their after-school career. For most, it sufficed to occasionally experiment with a camera lacking an aperture accommodating the human eye, usually a mildly subversive technique to accentuate the role of human vision in photography. Because pinhole cameras do without proper optical lenses, the images they generate are never formed tracelessly. Rather, they maintain an intrusive presence reminiscent of the shape, edges, and overall materiality of the pinhole, which, similarly, is intended to evoke the clarity and precision which both orthodoxy and custom expect from any camera. While such occasional experiments are certainly not mainstream, quite a few such artworks have been produced that way. One remarkable example is *Book Cam 1* by Taiyo Onorato and Nico Krebs, which playfully interacts with the concept of the pinhole camera as a contemporary emblem of everything it is not: common wisdom on photography, photo-scholarship, and most notably Ansel Adams' Zone System, the ultimate modernist attempt at artful pre-preparation of the photograph, ridiculed in its own time but brilliant nonetheless. (figure 01).



**Figure 1.** Taiyo Onorato & Niko Krebs

Far less common are photographers using pinhole cameras throughout their career. One of the most interesting is Aïm Deüelle Lüski, who has been using them exclusively since 1977. Such persistence in a career of over 45 years is extremely rare, but this is hardly its most intriguing merit. Deüelle Lüski's cameras are exceptional in that they are handmade and custom-built from start to finish, inside and out. Earlier on, he used materials such as cardboard or plywood which were simply accessible design choices. Later cameras featured natural wood, and on occasion included clay. Cameras built in recent decades incorporated materials such as plastic and metal which obviously required more sophisticated craftsmanship.

In so working Deüelle Lüski breaks free from the chains of pre-designed camera apparatuses, but other shackles are still in place. Therefore, he uses dental drills to open the 'lens' apertures in his cameras. Such artisanship allows for greater autonomy while avoiding pre-preparation or the pitfalls of discrepancy which pinholes open wide (as would surely be confirmed by anyone who has ever attempted to drill micro-millimetre apertures in aluminium foil, the go-to material for pinholed surfaces). Indeed Deüelle Lüski's cameras often contain not one but multiple pinholes, designed to admit light simultaneously at the moment of exposure.[3] Depending on

the exact positioning of such pinholes – whether projecting light on the same section of the opposite planar surface or not – multi-pinhole cameras produce images that are not only raw but also rough, certainly by standards of contemporary photography. Most importantly, they are also decentred, blurred, and abstract, owing to their multiple focal points.

While Deüelle Lüski is not indifferent to his own products, his project betrays a certain indifference to the classic products of photography. Moreover, his oeuvre intentionally turns its back on the consecrated desires of photographic production, namely the duty from which no photographer is exempt to meticulously plan what will be recorded on the negatives or sensors within their cameras, and consequently (or hopefully) featured in their photographs. The commonplace devices for such control are, with almost no exceptions, commercially available apparatuses reflecting the technologies and fashions of their day. Crucially, apparatuses seldomly make appearances in histories of photography[4], but they nonetheless eclipse all such histories. Indeed, since at least the 1880s and in some places long before, every photograph bore a birthmark whose photographer could not have erased.

According to Flusser, although it is based on scientific principles and technical complexities, the photographic apparatus is easy to handle. It is, nonetheless, not an apparatus on which you merely click a button, as Kodak's nineteenth-century pitch would have us believe.[5] Rather, the photographic apparatus in this construal is functionally simple yet structurally complex (Flusser 2013, 132). Thus, instead of accepting Kodak's 'fire-and-forget' description, Flusser suggests a concept of dynamic interaction between the apparatus and its user, as brilliantly demonstrated by Deüelle Lüski. For him, photographs are little more than a side-effect of a device that he designs and constructs himself in response to a philosophical problem. Moreover, every such device is not only *of* its own breed, but also its *entire* breed. Put differently, all his cameras are one-off's, such that no identical or even similar cameras will ever be constructed again. The reason for this is simple: Deüelle Lüski insists on devising a new camera for every shooting session. This means he spends weeks or often months, perhaps longer, designing and building a camera that will then be used for no more than one shoot. From the standpoint of most photographers, such a work process is puzzling, the equivalent of designing and constructing a new hammer for every nail. But it is precisely this exhausting task that Deüelle Lüski is interested in. He explains this as an attempt to address a philosophical issue: 'It all began the moment I realized one cannot turn the same device at the world in different situations, cannot go on using the familiar device used by all photographers as if it has no essence of its own' (quoted in Azoulay 2013, 26). Exhausting as this task may be, it is hardly Sisyphean. From a purely Flusserian perspective, the only conceivable Sisyphean task in this context, one we all take on voluntarily, is that of taking photographs with the same apparatus, which is neither of our own making nor our own at all. Further, since in Flusser's philosophy, photography is designated as the prototype of all technical apparatuses, only struggle against the apparatus can elevate photographic practice to 'the level of consciousness'. What's more, Flusser adds, 'A philosophy of photography must reveal the fact that there is no place for human freedom within the area of automated, programmed and programming apparatuses […]. The task of a philosophy of photography is to reflect upon this possibility of freedom […] in a world dominated by apparatuses' (2000, 81-82).

In 1998, Deüelle Lüski went on to build his 'Horizontal Camera'. This ended up providing the entire project with its raison d'être – systematic criticism of the vertical in photography. By vertical, Deüelle Lüski refers to the practice, prevalent since the invention of perspective, of having the image form on a vertical planar surface – whether a wall, a sheet of film or a digital sensor. Deüelle Lüski's terms are somewhat perplexing as the distinction between horizontal and vertical might not always be obvious and is rarely fixed. Tilt the camera forward or backward and vertical becomes horizontal (think of Weegee's famous murder scenes taken with an elevated camera, tilted 90 degrees forward and looking down on the ground). Deüelle Lüski's

intention is to offer critique on the vertical placement of light sensitive surfaces opposite the lens opening. In other words, the concept which Deüelle Lüski problematizes in his oeuvre is the *perpendicular* in photography (rather than the vertical). (figure 02).



**Figure 2.** Aïm Deüelle Lüski,
Ball Camera, 2004

Be that as it may, the compelling exploration in Deüelle Lüski's practice has become the horizontal (or non-perpendicular) placement of the negative, or often negatives, within the camera. This causes the image to be exposed to more light on the edge adjoining the aperture, and to receive significantly less light on the farther side. The resulting images are not only non-perspectival but also obscurantist. This makes abundantly clear that the vertical (that is, perpendicular) position selected in the past has always been but one geometrical and philosophical possibility. Deüelle Lüski's horizontal photography should thus be understood as questioning all prevalent forms of photography, in that it indicates that the components of these have only been solutions to a single problem: how to produce referential pictures (most-often by mimesis). As unique as this process is, it is nevertheless not completely free of external pre-preparation, as Deüelle Lüski has always used commercial film and photo-paper. Despite this, his work remains the exception that proves the rule: almost all other photographers succumb to greater degrees of pre-preparation.

Conceivably, photographic apparatuses are hard objects. A camera is usually constructed of metal, glass, plastic, etc., but it is not its hardness that makes it capable of yielding photographs. Similarly, it is not the wood of the individual chess pieces that enables a game of chess; rather, it is the rules of the game that allow play, or the elaboration of visual information[6]: 'What one pays for when buying a camera is not so much the metal or the plastic but the *program* that makes the camera capable of creating images in the first place […]' (Flusser 2000, 30, italics mine). The term program should be first understood on a basic technological level, as the sum of all operations an apparatus can be set to perform – that which the apparatus is prepared to do. In the case of photography, however, the concept of program also extends to the photographer's multiple decisions while making a photograph. All those are also conditioned by the programmatic possibilities built into the apparatus. The apparatus may therefore be understood as also programming its human user. This concept extends our previous technological definitions well

into the broad cultural context of present-day post-industrial society. At first glance, it may seem somewhat counterintuitive to describe photography with a concept so intimately associated with the computer, but Flusser insists: 'Computers are apparatuses that process information according to a program. This is the case for all apparatuses anyway, even simple ones, such as the camera […]' (1998, 259). This insistence raises the suspicion that photography should have never been historicized athwart the (analogue) medium of painting. Rather, it would have been better articulated (retrospectively) vis-à-vis the (digital) computer, in itself a designed and designing 'super-medium' (Kittler, 2006, 49).

Therefore, the human photographer, even one struggling against the apparatus, cannot defeat the program. The photographer's involvement, as dictated by the inner contradictions of pre-preparations, is therefore confusing. In fact, looking at any photographer and comparing their actions with the actions of a fully automated camera, it may be tempting to overestimate human freedom of choice. For it looks as though the fully automatic camera is always tripped by chance, whereas the photographer only presses the release when they approach a situation in the world that corresponds to their intention, their worldview, their desired form of information. If we look more closely, however, we can confirm that while the photographer's demeanour may at times be directed against the apparatus, it somehow always adheres to the inner instructions of other apparatuses and conforms with other programs. This is disturbingly evident even in Deüelle Lüski's oeuvre.[7]

Put differently, if we accept Flusser's programmatic world image (2011c), it follows that apparatuses and photographers are bound together, in forever asymmetric submissiveness: 'The apparatus does as the photographer desires, but the photographer can only desire what the apparatus can do. Any image produced by a photographer must be within the program of the apparatus and will be, in keeping with the considerations outlined earlier, a predictable, uninformative image. That is to say that not only the gesture but also the intention of the photographer is a function of the apparatus' (2011b, 20). In other words, and marrying Flusser's taxonomy with Don Norman's (2013), the affordances of photographic apparatuses prevent the emergence of non-redundant information, despite their signifiers. Befittingly,  and probably to the dismay of most photographers, this should be dubbed 'user-circumvented design'.

And if the photographic apparatus incorporates photographers, engulfs them and their viewers, as well as various programs, the question who owns an apparatus becomes moot. Moreover, when we consider the photographic apparatus in the aggregate, we may notice that within it there are several interwoven and contradictory programs: one for capturing, another for controlling, and possibly a transmitting program as well. Beyond these, there must be many more: those of the photographic industry that programmed the camera; those of the industrial complex that programmed the photographic industry; those of the socioeconomic system that programmed the industrial complex… ad infinitum. In fact, since every program requires a meta-program by which it is programmed, it may be concluded that there is no program for all human apparatuses. Who then holds the power of choice? Flusser (1986) argues that it is the toolmakers (or information programmers in contemporary parlance). They too may be subject to an open-ended hierarchy of programs which is unexclusively human, with layers of non-human programming, be they evolutional or technological, above or in place of human layers.

The oeuvres of Tuula Närhinen and Tamás Waliczky interrogate both options, evolutional programs and technological ones, respectively. The concern in Närhinen's *Animal Cameras* series (2002) is with the myriad ways animals see the world. To that end, she built pinhole cameras to understand 'What does the environment look like through the eyes of a bird, a rodent, a fish, or a moose, for instance?' Clearly, seeing, looking and other such verbs invoke both human and humanistic connotations – 'seeing is knowing' and the like. However, this is not the immediate intention here, as animal seeing is firstly interrogated by Närhinen as, quite simply, the most

efficient and popular type of sensing, practised by almost all members of the animal kingdom. In building and using pinhole cameras, Närhinen has clearly measured and calculated locales and habitats wherein such seeing may occur. This affords opportunities 'to peek out of a vole's tunnel, dive under water, hide in the underbrush or view the foliage through the eyes of a moose' (Närhinen, 2022). (figure 03).



**Figure 3.** Tuula Närhinen, The Hare Cam from the series Animal Cameras, 2003 (production view)

While these ends have indeed been met by Närhinen's cameras, they are not the most important aspects of her work since both a human eye, as well as other types of cameras, could have conceivably been placed within a vole's tunnel, à la National Geographic. More important are the goals which have knowingly *not* been met by Närhinen, because they simply cannot be met by humans. Surely, the anatomical structures of many types of animal eyes have been studied by humans and some can be artificially replicated: several eyes, their size and location within the animal's body and relative to one another, their foveations etc. What cannot be replicated in any humanly designed camera (pinhole or other), is the band sensitivity of such eyes and the neurology which accompanies it. While human neurology is arguably where the age-old humanistic 'eye as mind' equation stems from (and the only place it exists), animal neurology is undoubtably of a different order. What is crucial is the band sensitivity that is followed by neurology: the fact that many animals see the world with and through electromagnetic bandwidths other than our own. Snakes can detect infrared radiation, reindeer often rely on ultraviolet, while birds sense the Earth's magnetic fields (an ability without which they would not have been able to migrate across the globe). These are but a few examples showing that even had Närhinen embedded other band sensitivities within her cameras (a choice she intentionally did not make), we would still have not been able to see or sense like other sentient beings. We lack the electro-

magnetic sensitivities other beings possess. Thus, what Närhinen's oeuvre emphasizes is not the fact that most camera apparatuses are limited but rather that they are *limiting*: programmed by humans, according to exclusively human specifications and sensitivities, and meaningful only to them. Alternative forms of scopic programming, like her own, might yield other reciprocal connections between natural faculties humans possess and nature's faculties humans always depend on, despite their own denials.

Human cultures are often defined by their methods of elaboration and preservation of information. Yet many such methods require tedious procedures. This arguably is the simple intention behind all inventions of photography: to process visually available information faster and to preserve it more efficiently than humans can. This is also why creativity today no longer depends exclusively on the ability to fabricate physical objects. Instead, it should be understood as the ability to program apparatuses and to direct them to culturally desired outcomes. In the case of photography, however, the question of programming is elusive, for two main reasons. The first is easier to explain: a photographic apparatus, construed in the strictest sense, mostly contains components that are not located within a single space. Rather, it is always a whole composed of many different components that can be spatially clustered, but seldom are. Even the simplest photographic apparatus is composed of a physical body, usually with a lens, a controller or processor, which need not be physically attached to the body, and some other necessary protocol. The latter includes the environment where the photographs can be produced. Previously this used to be called a darkroom; nowadays it is called screen. In that regard, Adobe's decision to name their powerful photo-editing tool LightRoom cannot be understood as anything but a reference to, or a joke at the expense of, the history of photography. Thus, the various components of a photographic apparatus are often spatially dispersed, as well as temporally distributed. Whatever programming comes into play, it is not generally directed by the photographer themself. Rather, it is outsourced and run elsewhere by programmers: some design the camera's architecture, others construct its hardware features, and still others write its software.



**Figure 4.** Tamás Waliczky, Camera for Abstract Film, 2017/2018

Tamás Waliczky is interested in the roles programmers occupy. His series *Imaginary Cameras* (2016-19) problematizes commonplace definitions of photography as set apart from other programs for generating referential visualizations, most notably 3D software and gaming engines. These are increasingly seen as photography's evil doppelgangers – devoid of its ontological privilege (physics and chemistry) but outplaying it on its own epistemological turf. While Deüelle Lüski and Närhinen's cameras are extremely unlikely, they are nonetheless existent and useable. Conversely, Waliczky's cameras are imaginary in the everyday sense of the word (chimeric, fanciful, and fantastic) but not entirely unlikely. In fact, their design foregrounds a strong bearing to the history of photography, and particularly to the by-now-unfamiliar photographic apparatuses: stereo(scopic) cameras, the zoetrope (and zoopraxiscope), and the orthographic camera, to name a few. (figure 04). Their meticulous fabrication is synthetic, however: their superficial pledge to the so-called analogue history of photography conceals their true genesis as digitally manufactured 3D models. These are peculiarly presented as analogue prints: photographs of never-photographed photographic cameras. As such, they arguably become photography's doppelgangers' doppelgangers.

Importantly, previous periods in the history of photography have coincided with shifts in human ways of seeing. This holds true for seeing in its myriad cultural contexts (*what* is accepted as seeing, *what* seeing is acceptable, etc.) as well as for natural ways of seeing (*how* seeing takes place and *where* sensing becomes seeing). To that end, Waliczky presents varying potential ways of seeing (and mapping vision) with imaginary photographic cameras which *might* have been invented had the history of photography (or its historiography) followed other technological trajectories. This is indeed a form of variantology, but it is much more, as such alternative trajectories are nowadays re-emerging. Waliczky (2022) argues that 'the worldviews of the inventors… predetermined the operation of new tools and the quality of the images they produced'. This is an overtly Flusserian statement that does not preclude the possibility that Waliczky's own worldviews also predetermine new operations within tools, devices or apparatuses (not all of which are imaginary). Consequent worldviews will, through their respective programs and apparatuses, similarly produce new forms of seeing, new image floods, and new imaginaries.

Contemplating on the writing of the seventeenth-century German poet Angelus Silesius, Flusser outlined two ways of seeing: one through time, the other to eternity (1999, 39-40). The former is embedded in long-familiar devices such as the microscope and telescope. The latter is reflected in the actions of far-sighted humans. Standing on a hill and staring beyond the horizon, the people of Mesopotamia foresaw draughts and floods and marked lines on clay tablets, indicating canals to be dug. Estimating the changing course of the Euphrates, these prophets found a way to irrigate their present and future fields. These were the first designers. Modern designers of the mid-nineteenth century also saw droughts and potential floods. They thus dug a canal so big that an entire new river started flowing in: photography. Designers like Deüelle Lüski, Närhinen and Waliczky are now attempting to divert this mighty river to new fields.

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## Notes

[1] Quasi-photographic images require extensive computer treatment of data *prior* to their production *as images*. They afford the same cognitive accessibility as photographs but are also actionable and programmable. For explication of this term please see Toister 2016.

[2] For the sake of brevity, suffice to note that Flusser's definition of image can be understood in correspondence with Walter Benjamin's definition of image in his famous 'Work of Art' essay, 2008.

[3] Based on conversations and personal correspondence (2012-2019).

[4] If ever they do, other than in Josef Maria Eder's history, Eder 1978.

[5] 'You press the button, we do the rest' was Kodak's advertising slogan, coined by George Eastman in 1888.

[6] Like Flusser, I use the term information in its Shannonistic sense, Shannon 1948.

[7] Had this not been the case, Azoulay's attempt to find geopolitical intelligibilities in Deüelle Lüski's images, such that still stems from (or instead enforces) pictorial referentiality, would not have been possible. Azoulay 2013.

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# Design and Abstraction

JEFFREY STRAYER

**Abstract:** This article examines how the notions of design and abstraction are to be understood and related when the goal of creative investigation is to produce the most reductive and radical artworks possible. An outline of the development of abstraction in art history is sketched, and special attention is devoted to the ideas of something and nothing as pertinent to that development. The more reductive radical artworks possible cannot be produced simply by limiting the perceptible properties of a visible object. Rather, one must look beyond the surface and consider how knowledge of the necessary conditions of making and apprehending works of art might guide the inquiry into abstract art and its possibilities. Of principal significance here is the conscious construction of the thisness of a particular object determined in the event of its understanding. Design in ultimate abstraction will focus on how to fashion identity in relation to its identification.

*Keywords:* abstraction, conceptual design, Essentialism, language, consciousness, agency

### Introduction: Summary of the argument and outline of its progression

The most interesting and challenging philosophical question regarding artistic abstraction is how minimal in form and content something can be and still be a work of art. The daunting challenge for art is how to design artworks through which the possibilities of extreme kinds of abstraction are tested and revealed. The interrelation and resolution of these issues are the subject of this article. The answer to the philosophical question noted requires consideration of what the question presupposes. That means looking beyond the perceptible properties of a perceptible object to the necessary conditions of making and apprehending works of art as the foundation on which the creative design of any of the more reductive artworks has to rest. The identification of those conditions reveals that a distinction between the meanings of the words 'abstract' and 'Abstract' must be recognized and that it is the novel meaning that attaches to the latter notion that is of principal importance to the subject of this investigation.[1] As the design of the more Abstract artworks possible depends on variously using essential conditions of making and apprehending works to determine the identity that is essential to any artwork, the artistic program of identifying the limits of Abstraction in art is called 'Essentialism.'[2] Because perceptual objects as merely visual cannot carry the conceptual information required to reach the limits of Abstraction, language has to be used that will not only specify what all or part of an artwork is to be understood to be, but will engage its understanding to result in objects in or through which the more reductive and radical objects possible are revealed.[3] Such understanding is then productive, and means that the determination of particular artwork identity must be indexed to the conscious comprehension of that identity. This comprehension depends on understanding language that specifies that identity, as what is understood is understood both in relation to the properties of the object that contains it, and to the mental events and properties on which that comprehension depends. Because the concepts of consciousness, agency, object, identity, and difference lie at the foundation of our conceptual scheme in general, and as it pertains to making and apprehending works of art in particular, artworks that focus on the use of

them to produce works of art will be more Abstract than works in which those things are assumed rather than used in their determination.

The order of the article proceeds as follows. Different definitions of the words 'design' and 'abstract' relevant to the fundamental question cited are first canvased. Because the question of the relation of design and abstraction arises through the history, conditions, and possibilities of fine art, the evolution of abstraction is next briefly outlined in selected works of art that are cited as figuring in the course of that progression. This includes looking at the pertinence to abstract art of the notions and relations of something and nothing, and works by Joseph Kosuth, On Kawara, and Ray Johnson are considered that are germane to those notions as they pertain to the limits and possibilities of abstraction. Abstraction in art history continues as the topic of the fourth section in which works by Robert Barry and Victor Burgin are cited to illustrate the importance of language, indexicals, and understanding to those limits and possibilities. The subject of the fifth part is the necessary conditions of making and apprehending works of art, and section six pertains to the ways in which the character and connection of design and Abstraction in Essentialism figure in relation to the 'configuration space' of Essentialist artworks. That is followed by how form and function can be understood in Essentialism in section seven. The pursuit of Abstraction in the identity–identification relation next sketched precedes the penultimate section of the article, which concerns the relevance of the notions of thisness and haecceity to the subject of this inquiry. The article concludes with an analysis of an Essentialist Abstract artwork in which one kind of limit of Abstraction is identified.

### The terms 'design' and 'abstract'

There is an active and a passive sense of design, and a primary and secondary form of design that fits both its active and passive senses. To design something is to act according to a plan to produce something whose character bears a relation to the act or acts on which it depends to have that character. The active sense of design pertains to constructing something according to a conception so that its nature and identity as a created object reflect its relation to that conception. The passive sense of design then refers to the form and content of the determined object whose apprehensible properties reflect the notions, decisions, and actions in virtue of which it has those attributes. The primary sense of design, for art, concerns the act or actions of the artist(s) and the artistic product that results from that act or actions. It fits the vast majority of artworks in the history of art. However, an artwork may be so designed in the primary sense that attributes of the primary object of design are meant to engage the observer in the production of an additional object or objects that all or part of the work is to be understood to be. The secondary form of aesthetic design in that kind of case applies both to the act or actions of the observer(s) required to produce such an additional object and to the artistic product that results from that act or actions. Victor Burgin's *Ideas Structures Project* of 1970 is an example of such a work, and another work with these dimensions of formal design will be seen at the end of this article.[4]

The idea of abstraction in general is to draw or take away something from something else so that the thing withdrawn and kept is emphasized as a focus of attention and what is left behind as discarded is ignored. The term 'abstract' has meaning both within and outside of art. To take the latter first, an object is abstract if it is spaceless, timeless or eternal,[5] immaterial, causally inert, indestructible and, typically at least, mind independent.[6] Abstract(ion) in art has to do with the reduction of detail that is achieved through omitting some elements of figurative images while emphasizing those that have been retained. It can also mean organizing shape and space in such a way that their interaction provides an alternative view of reality, as in Cubism and Futurism. Artworks become more abstract as they eliminate imagistic, symbolic, or suggestive reference to common or imagined reality, resulting in a work of Non-objective art that consists of colors and shapes that figure only as such as they stand to one another in formal aesthetic relation. Abstraction in Essentialism means using the fundamental elements of making and apprehending works of art to create, con-

struct, or otherwise determine works of art in which the use of those elements is reflected in what the work is to be understood to be. An artwork of Essentialism then is Essentially Abstract because its particular identity reflects the use of the basic kinds of element required of artistic identity in the determination of that identity.[7]

1. *Abstraction and art history I: something and nothing*[8]

The basis for organic abstraction began with Turner in the 19th century and then mutated and evolved in various ways through Monet and Impressionism, Whistler, Van Gogh, Gauguin, Fauvism, af Klint, Kandinsky, Soutine, Corinth, Kirchner, and the German Expressionists, followed by Pollock, de Kooning, and Rothko, and the Abstract Expressionists whose work is more indebted to the lines, shapes, and colors of nature than to the artifactual divisions constructed by man in the manufactured environment. Geometric abstraction stems from Cézanne and grows and forms in the Analytic Cubism of Braque and Picasso, and then through the work of Mondrian, Malevich, Albers, Barnett Newman, Ad Reinhardt, and Agnes Martin, among others. When Marcel Duchamp exhibited readymade objects as works of art, he eliminated the manual labor that commonly preceded the creation of an artwork and showed that art can be produced, if not traditionally created, by the selection of an object whose exhibition as art in a fine-art context makes explicit the claim to be art that he meant to be implicit in that selection.

None of the lines of development cited is meant to be complete, and no suggestion is made that the works of the artists and movements cited only have importance, or even primary significance, in relation to the evolution of a/Abstract art.

Although the degree of an artwork's abstraction is not the same as its simplicity, the notion of what Béla Bartók called the "inexorable elimination of inessentials" is of the utmost importance both to the development of abstract art in history and to the question of how to continue that development in the design of Essentialist Abstraction.[9] Where can art go in search of the 'zero point' of reduction after a monochromatic painting that eliminates imagery, line, shape, and internal differentiation has simply asserted itself as a self-enclosed non-referential object? Joseph Kosuth's 1965 work *Any Two Meter Square Sheet of Glass to Lean Against Any Wall* eliminates opacity and the uniqueness of a singular object typical to art history by making an instance of such a sheet of glass leaning against some wall a token of a type.[10] Although Kosuth did not design the glass relevant to this work, we could still understand design to fit the coordination of the ideas and actions required to organize a state of affairs in which art transcends opacity and uniqueness and draws attention both to physical and cultural characteristics of the physical and institutional structure on which it literally and figuratively leans as a visible set of connected data meant to be art. The form of this state of affairs is partly perceptual and party conceptual and the interrelation of the two constitutes the aesthetic design of the work.

This complex work raises a couple of interesting questions. The first has to do with something. If Kosuth removed the idea of uniqueness from a work of art, could an artwork be an object without being any particular object? That is, could an artwork just be something but not a particular something? As the stage after transparency and the elimination of uniqueness would seem to be nothing, the second question is if a work of art could be nothing. As one cannot make nothing, how could something be designed so that nothing as nothing would be understood to be a work of art that follows from that design? And if an object has to exhibit formal relations between at least two of its parts or apprehensible aspects to be a design, and as nothing qua nothing consists of nothing to be related, then nothing as a work of art would reveal that there could be an artwork that is not a design, and so would constitute an exception to centuries of artistic practice. Should it be possible to single out nothing as a work of art, in the sense that it is understood that the work is to be identified with nothing, then the sense in which such an artwork involves design must pertain to how nothing as nothing can be conceived and revealed to be a work, so that what the artist designs in conceiving of

how to identify a work of art with nothing is the set of interrelated ideas that characterize the thinking that underlies a means of making that illustration comprehensible.[11]
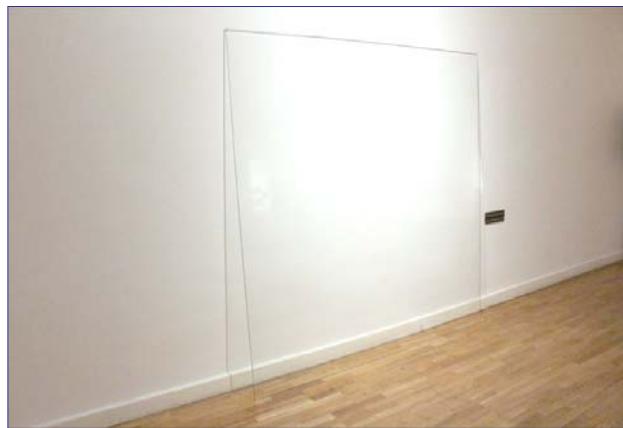


**Figure 1.** *Any Two Meter Sheet of Glass to Lean Against Any Wall* (Joseph Kosuth, 1965)

The conceptual contrast between nothing and something, and the relation of something to anything that would be understood to be a work of art, recognizes the importance to art both of understanding concepts in the functioning of thought and the importance of distinction in the isolation for understanding of anything that is to be understood to be a particular work of art. As nothing lacks parts and properties, one cannot use or target parts or characteristics of nothing in an artistic investigation that would result in its being a work of art. In this respect nothing differs from both an object that is something and what is everything, since characteristics of each can be used in relation to appropriate actions and intentions to bring about the identification of a work of art with either kind of thing.[12]

Each thing is a particular something that can either be apprehended in a way that recognizes its particularity as an individual thing that nothing else is, or that can be seen as an otherwise anonymous instance of something as something, in which case it does not advance in thought beyond that kind of general classification. A paradigmatic manifestation of this analysis of the concept of something appeared in 1963 when the Japanese Conceptual artist On Kawara printed the word 'SOMETHING' in capital letters in Letraset on paper and titled the work *Nothing, Something, Everything*. This work can either be understood to use the word 'SOMETHING' to single out any object of all objects without singling out one object to the exclusion of everything else – so that the work would be something of everything without being any particular thing – or the work can be understood to use the word 'SOMETHING' to single itself out as being something to which the word applies. In this second case, SOMETHING draws attention to itself as a token of the type *something*, both as word and object, at the same time that, in having the referential relation to itself that it is the means of providing, and in being exhibited as a work of art, it singles out the particularity that it is designed to have as something whose symbolic nature and relation to mind enable it to refer to its being a being that is to register as such in awareness. The meaning of the word 'SOMETHING' allows it to pertain to itself as something that instantiates the idea of something that it is the source of evoking, so that SOMETHING as a particular something is enclosed in that self–reference, and the anonymous direction to a different something is precluded in the conceptual intimacy of that relation. Of all somethings this is the only something to which SOMETHING can be understood to have that particular connection. That connection is individual and specific, and results from the symbolic character of the word as understood within a fine-arts context. Every other something as something is anonymous.

**Figure 2.** *Nothing, Something, Everything* On Kawara, 1963

Although conventional artistic understanding would suggest that Kawara's work *Nothing, Something, Everything* is a discrete perceptual entity containing the word 'SOMETHING,' the previous remarks indicate that this work cannot be said definitively to be the visual object containing the word 'SOMETHING' without violating the indifference in the diversity of reference that it makes possible. The radical character of this work results from the fact that it can be understood to refer to a particular something or an anonymous something without providing a means of deciding between them. Rather than being a bounded object on a wall containing a word – and so taking the standard form of standard works of art – the work can be understood to set up a disjunctive state of affairs that is to remain disjunctive in providing no way of deciding which something of either kind of something the work is to be understood to be. This constitutes a departure from the usual relation that holds between an artwork and everything other than the artwork, which is exclusionary. That is, the world typically divides into an artwork *x* and everything other than *x*. Because in *Nothing, Something, Everything* the same symbol SOMETHING does different referential work according to different interpretations, the typical difference between the work and the world as different here is different.

Each visual work of art, such as a painting, is something. And the perceptual object or information on which the understanding any artwork relies is something. Although nothing itself is not perceptible and cannot, as nothing, form part of anything, it may be possible to make one understand nothing to be a work of art by utilizing something to make that understanding possible. However, there are two apparent logical problems here. The first has to do with distinction and distinguishability. How can nothing be distinguished from something if it lacks any property that would enable it to be discriminated from anything else? It would appear then that any attempt to use something to identify a work of art with nothing would have to fail, since nothing qua nothing could not be distinguished from anything else, including from whatever is used with the intent to make that identification comprehensible. The only thing that could be accomplished would be to use one thing to isolate another thing for consideration as a particular work that may be very minimally something but is not nothing. The second problem has to do with the logic of properties. If nothing is to be thought of as what lacks every property, including the property of differing from something, then it cannot acquire any property, including being a work of art, without ceasing to be nothing in virtue of the acquisition of that property.

It could be that to make nothing comprehensible a distinction needs to be made between nothing as the absence or negation of something and nothing as a concept. Nothing as the absence of something is what is meant in asserting that there was nothing prior to the Big Bang. But when nothing is understood to be distinguished from something and everything, for instance, then nothing is an idea that has a perfectly good use in thought and commerce as a common notion in our conceptual vocabulary. Whereas there is nothing to nothing in the first sense of which we could predicate properties, that is not true in the second sense, where nothing as the concept used in the thought of nothing has the properties of so functioning and of being something to which the notions of something and everything have conceptually determinate relations. The distinctions recognized are critical to the design of an abstract artwork meant to be nothing and they hinge on the presence or absence of objects and the presence or absence of mind.
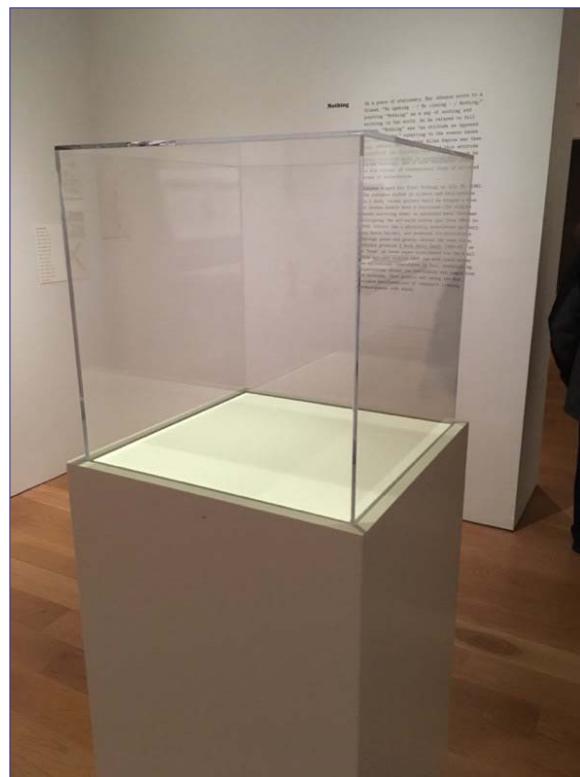


**Figure 3.** *Nothing* Ray Johnson, 1989

The concept of nothing that is relevant to the identification of an artwork with nothing – as in Ray Johnson's *Nothing* of 1989 that uses a clear acrylic cube to enclose a visually empty space – is the concept of nothing that presupposes active intelligence. Given the title of this work, one understands in viewing Johnson's *Nothing* that the emptiness inside the box represents nothing and that the box is the means of making the relation of what it contains to an understanding of nothing explicit. And we take this to be the case even if the being bounded of a delineated cube of space is something rather than nothing. Having arrived at this point, the question to ask is if abstract art reaches a single terminal point in nothing or if, instead, there are other artworks that are as, or more, reductive than nothing. If that is the case, then it must be because of the way in which such an artwork depends on, and reflects its relation to, the necessary conditions of making and apprehending works of art, and consciousness and agency in particular. Johnson's work retains the customary structure of subject–

object detachment in which mind is a presupposition of art-identity understanding, but mind is not enlisted as an active ingredient of art-identity determination as it is in works of Essentialist Abstraction. Thus, the empty cube is passively received in perception as a confined empty space, and nothing here is actually something that is marked off in a traditional form of object making and exhibition that is not instead arrived at in virtue of engaging thought in its conceptual delineation, as thought is engaged in object determination in *Haecceity 9.149.0* to be seen and considered below.

Something of interest to note about the design of an artwork and its relation to artistic intentions is that certain things of value may follow from, or have an aesthetic, artistic, or conceptual relation to, the design that was not intended by the artist who designed the work. It may be that neither Kosuth nor Kawara nor Johnson conceived of their works in relation to the matters of importance that I assign to them in the way that I do. And yet, because the remarks made are supported by their works and the nature of their designs, matters of the kind to which I have drawn attention can be due to, and supported by, the artifacts produced even if they are not directly historically linked to the original thoughts of the artists responsible for the works and the character of their designs.

### Abstraction and art history II: language, indexicals, and understanding

The determination of a limit of Abstraction in art that may lie beyond nothing, or that may be thought to equal the degree of Abstraction of nothing, depends on the epistemological and indexical relation that a person has who is attending to an object relevant to a work that is designed as a means of establishing such a limit. Identifying the limits of Abstraction in art, and designing an object to figure in the realization of a work in or through which such a limit would be determined, requires language to identify the more Abstract possibilities of singling something out. There is simply no other means of engaging mind to apprehend and/or create the kind of object with the kind of conceptual precision that is required of this kind of creative exploration.

At 1:36 PM, June 15, 1969 Robert Barry wrote the words *all the things I know but of which I am not at the moment thinking*, and then appended the time and date noted to the language to make what is singled out by it indexed to Barry's awareness of it at that time.[13] A 'specification' is a piece of language of one or more words that is used to single out an object that all or part of a work is to be understood to be. That is, language is used to make it comprehensible what the whole or part of an artwork is meant to be. The language and the object that contains it is not the work.[14] Rather, language is used to make comprehension of the intended identity of a work possible. Specification is as much a means of artistic production as are Duchampian selection and the standard practices of object creation in painting and sculpture. Specification does not contradict Abstraction but can be used with the principles of Essentialism to determine the more Abstract objects possible. Barry's language in *all the things I know . . .* functions as a specification, and the way that I talked about the work by On Kawara treats the word 'SOMETHING' as a specification. This work by Barry uses language to delineate a class of epistemological objects indexed to Barry's consciousness at the time and date given that had to do with general and personal knowledge as features of his experiential biography. This is something of which we cannot be aware in the sense of being acquainted with it, as we are acquainted with a painting in perceiving it. It is an object that we can only understand to be a work of art. Accordingly, it has a relation to conscious comprehension and to perception only to the extent to which understanding its intended identity rests on the apprehension of which perception of the words is a constituent condition. We can be aware *that* the object of the specification is that work even though we cannot be directly aware *of* any object that is a member of the class, as such an member, in the way that we can perceive or be directly acquainted with works of perceptual art. As we can only understand and not perceive what the work is intended to be, this work illustrates that the intended identity of an artwork need not have the relation to awareness with which we are familiar from art history. This fact makes it, with the work by Victor Burgin to follow, an important forerunner of the works of Essentialism.

In such works of linguistic Conceptual art as his *Ideas Structures Project* of 1970, Victor Burgin used the language of specification to engage the person attending to it to understand of what the work was intended to consist, and to make certain aspects of the work depend on objects created through that engagement.[15] For instance, one specification is used to single out objects in the room in which the language is located and another is used to refer to appearances of such objects as earlier experienced by the person to whom the language is directed. This technique enlisted conscious acts and understandings in the determination of the identity of the work as the language germane to that determination is indexed to the time, place, and particularity of those acts and understandings. As the objects and events relevant to this work are indexed to the conscious acts on which they depend, and are distributed across such acts of the same and different people at either the same or different times, they constitute a work of such extreme abstraction and nature that it invites the question of how to proceed further in the determination of greater abstraction and even more radical identity.

Consciousness and action are always required to engage with, interpret, understand, and value any work of art, but these and other works by Burgin and Barry use consciousness and action to determine the identity and character of the works. The consciousness of someone attending to a traditional work of art is passive in the sense in which one receives in sight and understands the work as a completed object, but this is not true with the work cited by Burgin. The problem that arises for anyone who would extend art in the direction of greater extremes of reduction is determining what the advance beyond Barry and Burgin would depend on and how it might be realized.

### The necessary conditions of making and apprehending works of art

To identify the extremes of reductive possibility one needs to understand what is essential to making and apprehending works of art. This is a job for philosophy and is one aspect of Essentialism.[16] Once those necessary conditions have been identified, one has to develop means of using the conditions in relation to themselves to investigate what that use enables to be determined. That is a task for art.

There is not room here to consider this in any detail.[17] The basic points follow. The fundamental artistic action is singling something out. What is singled out is an object of some kind of object, using 'object' in the widest possible sense, so that everything is an object. Every object has a particular identity that everything else lacks and every artwork differs from everything that lacks its particular identity. This identity must be comprehensible, even when it is not possible to be aware of the object itself that the artwork is intended to be. Knowledge of intended identity is required to contemplate, interpret, appreciate, evaluate, and otherwise respond to the work.[18] There is a necessary relation then between the artistic determination of what the work is to be understood to be and the public understanding of that intended identity. This understanding depends on an apprehensible object that is either the work or is the means through which its identification with something else is made comprehensible, as with the works cited by Burgin and Barry. A subject's epistemological relation to such an object depends on choice, and so agency is a necessary condition of making and apprehending even the most Abstract artwork possible.

Because every artwork is an object; because every object has a particular identity that differs from everything that lacks its identity; because it must be possible to understand an artwork's identity; and because knowledge of an artwork's identity depends on an object of which it must be possible to choose to be aware, Essentialism must use consciousness, agency, and objects to investigate identity and difference. This requires the use of language since only language has the flexibility and precision necessary to engage the reflection and comprehension required of the Essentialist investigation of Abstraction. How identity and difference are related in the determination of the particular identity of a particular artwork, and how their relation is targeted and determined through using language and perceptual data to address consciousness and agency in that determination, is of particular interest to Essentialism.

## Design and the configuration space of Essentialism

An Essentialist 'space of apprehension' results from placing language in a perceptual object that is addressed to the 'field of understanding' that the conscious subject brings to the encounter with that object. The field of understanding includes both the cognitive capacities that the conscious subject brings to an engagement with that space and such cognitive events as perception and understanding that are relevant to interpreting and appreciating a work of art.[19]

The space of apprehension of an Essentialist artwork is the designed space of its perceptual object. It includes its language of specification, any perceptual elements of that space that have to do with the repetition, division, and placement of the words of that language, and the abstract space of meaning apprehensible through language in thought and understanding. The term 'apprehension' in the space of apprehension recognizes this complex relation to language and the importance of the conceptual attention and activity prompted by characteristics of the perceptual object that, although presupposing visual sensation, do not terminate in it. In some works, the space of apprehension includes a 'space' or dimension of imagination in which the language on the surface is to be imagined to be on film, the purpose of which is to extend and complicate the notion of identity in relation to repetition, individuation, meaning, and understanding. The language of Essentialism is written to single out 'ideational' objects. An object is ideational when its being all or part of a work of art depends on understanding language that singles out the object in relation to that understanding. The Essentialist perceptual object, with its complex properties and relations of data, is the understood means of effecting the identification of a particular artwork with a particular ideational object, and it is specifically designed to be a necessary condition of realizing that intended identification. As such, it can be understood to be a record of the artistic intention of how it is designed to figure in some way or ways in the determination of the ideational object that is all or part of a work of art.

The space of apprehension, in being directed to the field of understanding, is designed to engage such things as perception, conception, reflection, recollection, imagination, inference, choice, and interpretation that are relevant kinds of event and capacity of which that field consists. This makes the Essentialist perceptual object a zone of potential, and creates with the field of understanding a 'configuration space' of Essentialism that consists of the space and field in active interaction. The configuration space of Essentialism, in consisting of the interaction of elements of both the space of apprehension and the field of understanding, is similar to what Alexander Alberro calls an "aesthetic field," as "an area of possibility through which the spectator constructs meaning."[20] In this space, language is used with consciousness, agency, and objects to investigate identity and difference as they pertain to the construction of the artistic identity whose comprehension presupposes their active interrelation.[21] The Essentialist space of apprehension includes language and visual data that are designed to interact so that one shapes the other as they combine to engage elements of the field of understanding to construct or determine an ideational object that is a consequence of that engagement. This relation of language and understanding means that the relation of subject and object in Essentialism is active and determinative and includes the conceptual in addition to the perceptual. Because of the dependence in Essentialism on the use of concepts in the determination of artistic identity, I call the subject to whom the language of Essentialism is addressed a 'concipient.' This term is used to reflect the intellectual participation that is required of the identification of ideational objects and that extends beyond the passive reception of visual forms in being a necessary condition of the determination and understanding of Abstract artwork identity.

How language, as visual, is to be used in relation to a perceptual surface is a question of design. The answer to why language is to be used in the way that it is used in a particular design follows from the informed artistic intentions that have led to it. How language, as conceptual, is written to engage the mind of the concipient in the determination of identity is also a matter of conceptual design that extends into the semantic dimension of the space of apprehension as it is addressed to the field of understanding. In addition, the relation of design and Abstraction in Essentialism extends beyond the

operation and results of original artistic intention to include observer-concipient intention and participation that are deliberately engaged to determine the nature and identity of an ideational object that results from that participation.

Design in art and abstraction is linked to, and focused on, the solution of problems. Such solutions in art may not only be of aesthetic and artistic significance but of philosophical interest and importance. Essentialist Abstraction as a design problem pertains, fundamentally, to the determination of identity in relation to the configuration space of an Essentialist artwork, such that the nature of that space is not only relevant to understanding and reflecting on what is determined in relation to it, but is relevant too to the interpretation and evaluation of the identity of what is so determined. Because of the complexity and multifarious nature of the space of apprehension, how a/Abstract spaces, with their objects and relations, can figure in the determination and understanding of identity via their necessary connection to intentional action and relevant kinds of conscious event is also a design issue to be considered. And because the cognitive ingredients of the field of understanding can turn on themselves and recognize their own contribution to the determination and analysis of Essentialist identity in addition to the parts and properties of the space of apprehension, these two aspects of the Essentialist configuration space can be understood to be different 'regions of recognition.'

How the nature, importance, and value of their interaction in the configuration space that they construct can, and should be, determined is fundamentally a design problem having to do with the diverse character of the things of which these regions of recognition are composed and the nature and variety of their interaction. This includes looking at how the spheres and data of perception and conception can be treated as areas and ingredients of stable and active construction that, in common with conscious events to which they are directed, determine the form and content of an ideational object shaped by a complex of things and relations that have aesthetic, artistic, epistemological, and ontological significance.[22] This will involve consideration of the relation of the syntax and semantics of the language of specification, as ideal, to its visual form as molded and affected by the perceptible structure of the Essentialist perceptual object, as they register in mind according to the character of that relation.

The previous points indicate that the contrast and interaction between the fixed, overarching, and generative nature of the design of the perceptual object, and the flexible, dynamic, and contingent nature of the perception, thought, and reflection targeted by it, are relevant to the issue of design in Essentialism. Finally, language and perceptual data are designed here to interact, not just in the construction or determination of an ideational object, but in any mental activity that follows its understanding that has to do with its interpretation and evaluation. Thus, the ideational object is to be understood, interpreted, and evaluated in relation to the interaction of the space of apprehension and the field of understanding, or in relation to the nature of the configuration space that is determined by that interaction.

### Form and function in Essentialist Abstraction

It is useful here to make a distinction between general and particular form and general and particular function. The general function or purpose of Essentialism is to investigate the limits of artistic Abstraction and to test notions of identity that attend that investigation. The general form of the enterprise follows from how the things on which it depends, including language, perception, and understanding, stand in relation to one another as necessary conditions of that exploration. The particular form of an Essentialist artwork is determined by how its ideational object stands in relation to the elements of its configuration space as they stand in relation to one another in the production, understanding, and interpretation of that object. The particular function of that work is to reveal a kind of identity determined in the particular way in which it is designed to disclose a particular limit of Abstraction. Essentialist form and function then operate in concert with one another.

In the general form and function of Essentialism, form follows function epistemologically in the sense that one has to *know* in general *what* an artifact is intended to do in an artwork to know how to design it, and so to give it a particular form that serves the general function stated above. In the particular form and function of an Abstract Essentialist artwork, function follows form ontologically in that it is only in virtue of the formal nature of a particular artifact – the formal character of the *being* that it has in being the being that it is – that enables it to function in the particular way or ways in which it is designed to function.

### Identity and identification

The relation that an artwork's identity has to the understanding of that identity is both fundamental and ineliminable. For that reason, investigating the relation between the understanding of artwork identity and the identity to be understood is operating at the most extreme level of Abstraction and is of the greatest importance to thinking about the relation in art between abstraction and design. For Essentialism, exploring how to use the fundamental conditions of making and apprehending works of art to examine the possibilities of linking identity to its identification is of principal interest. In particular, if a direct relation can be established between the identity and identification of a work, such that the former depends on and reflects its relation to the latter, this will represent one kind of Abstract limit.[23] The reason for this is that everything will have been omitted from the work except understanding the relation of identity to identification in making the first depend on, and reflect its relation to, the second.

### Thisness, haecceity, and Haecceities

Talk of an object's particular identity is a way of talking about its thisness or haecceity. An object's haecceity is the property that it has of being the object that it is. This is a particular logical property that is a consequence of the interrelated notions of object, individuality, identity, and difference. Every artwork has a haecceity that distinguishes it logically from everything else, and every artwork is a particular *this* that nothing else is. Essentialist investigations into the limits of Abstraction can also be understood to be an investigation of thisness in relation to artwork identity that, in being coupled with the conditions of making and apprehending works of art, explore how to make the particularity of identity a consequence of those conditions. For this reason, I call the specifications that I write that figure in the construction or determination of artwork identity *Haecceities*.[24]

### One limit of Essentialist Abstraction: *Haecceity 9.149.0*

> *what is to be understood in understanding how understanding this*
> *is related to an understanding that reflects its relation to this*
> *and the understanding of this in some understanding*

*Haecceity 9.149.0*
Illustration 1.

The language of *Haecceity 9.149.0* appears in Illustration 1 above. That specification, as visually distributed and configured in Figure 4 below, and as a comprehensible unit of meaning, forms with conscious thought an interactive complex of things and relations that constitutes an instance of the configuration space of Essentialism. These things, functioning together in intended relation, are the means by which an ideational object of the work of this specification is generated, and their understood connection creates the comprehensible condition that an object must meet to be such an ideational object.

The constituent language *what is to be understood* of the initial language *what is to be understood in understanding …* of *Haecceity 9.149.0* can be understood to refer either to the abstract meaning of the specification as an independent object of understanding, or to the *being understood* of that meaning as an act, so that the meaning is the content of an occurrent event of understanding. In the former case, the word *what*, in *what is to be understood*, refers to the abstract meaning that is grasped in an event of understanding what is to be understood in understanding the specification. In the latter case, the word *understood*, in *what is to be understood*, pertains to a cognitive fact in which what is to be understood is actively grasped. This means that how the words *what is to be understood*, in *what is to be understood in understanding …*, are understood will direct understanding in one way or the other: to an abstract meaning or to the being understood of that meaning. In either case though, the language of specification has to be understood to function as a specification – *what is to be understood* has to *be* understood – and so each version, including the abstract meaning, is linked to understanding and cannot be detached from it. However, in the second case what is *to be* understood is so coupled to the fact of its *being* understood that these are coordinated elements of an existential event that manifests, as it understands, how it features in that conceptual relation. As such, it underlines the general dependence of art on consciousness, and so is the more Essentially Abstract of the two ways of thinking noted about the initial five words of this specification. This second understanding of the relation of what is understood in understanding the *Haecceity* to its understanding is implicit in the following remarks, even when one can understand an understanding of the *Haecceity* to involve other understandings in the determination of an ideational object that is singled out by the *Haecceity* understood.

There are two basic ways in which understanding this specification can be directed in understanding the specification. And this bidirectionality can be thought to be something of an Essentialist variation on the work by On Kawara considered above. The content of the first kind of understanding sees that it and a different event of understanding the specification have in common being epistemological effects of which the specification is the common cause. Each understanding then is alike in being a sufficient condition of the specification that is a necessary condition of each having that relation to that specification. When this is understood, then the being understood of that common connection can be understood to be singled out by the language that is a condition of understanding the relation that it shares with other understandings of the relation shared through such an understanding.

The second kind of understanding understands itself to realize reflexively the relation to an understanding that a single understanding must have to be singled out by the specification understood in that kind of understanding. Because of how it turns back on itself, the second kind of understanding described in the following paragraph is more Abstract, interesting, and Essentially aesthetic than the kind of understanding considered in the previous paragraph.



**Figure 4.** *Haecceity 9.149.0* Jeffrey Strayer, 2022

The Abstract character of the reflexive kind of ideational object singled out by *Haecceity 9.149.0* is determined by the way in which what is to be understood in understanding the specification and an act of understanding the specification stand in relation to one another as elements required of an understanding that grasps their relation to one another as interactive constituents of the condition of that understanding. More specifically, the language of this specification is so narrowly written that what can be understood to be singled out by this *Haecceity* – as what answers to *what is to be understood* in *what is to be understood in understanding how understanding this . . .* – is a higher-order understanding that, as the understanding of how understanding the specification is itself something that reflects its relation to the specification, realizes in the fact of its occurrence what is to be understood in understanding its relation to the specification as such a reflective understanding. Accordingly, the ideational object that is understood to be singled out by the specification is the understanding of a state of affairs that it figures in constructing, and to which it sees its relation, as the exemplification of what is to be understood in understanding its relation to what is to be understood as such an exemplification. What is realized then is the existential fact of a cognitive state of understanding that what is to be understood in understanding the specification is the relation in which what is to be understood, as a comprehensible condition of a particular understanding, stands to its understanding as the realization of that condition. The Abstract consequence of this state of affairs is that the understanding of that comprehensible condition, in reflecting its relation as an understanding to what is named by *an understanding that reflects its relation to this and the understanding of this in some understanding*, itself conforms to the condition that it understands to be a condition of understanding itself to conform to that condition, and so to be singled out by the specification in which that constituent language appears and on whose comprehension its understanding of its relation to the conditions on which it depends.

This understanding of *Haecceity 9.149.0* realizes, in content and occurrence, its relation to the conditions required of an understanding to determine its relation to those conditions in that understanding. Then the process of understanding the language of the *Haecceity*, as an unfolding active event, is utilized as a secondary means of designing, as a kind of cognitive construction proceeding according to an original plan, the ideational object that registers in its noetic character the formal and semantic aspects of the secondary design that is the immaterial product of that construction. This can be understood to be a case of the being designed of a being designed as secondary forms of design, and its realization represents one kind of radical identity in one kind of limit of Abstraction determined by one form of primary design according to principles of Essentialism.

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## Notes

[1] However, different meanings of the term 'abstract' may be apt, and when they are, I write a/Abstract to reflect the relevance of each to the thought in which the use of that term appears.

[2] Use of the term 'Essentialism' throughout this article is meant to convey in a single term a set of interrelated notions that would otherwise take several words to express, and whose omission in favor of those words would result in the kind of redundancy in which repetition becomes objectionable. Any other meaning that 'essentialism' has in or outside of philosophy is irrelevant to the particularity of its use in the way that it is used as it pertains to the subject matter of this investigation.

3  An artwork is 'radical' or has a 'radical identity' either when it challenges accepted forms of making and apprehending works of art and of understanding intended artwork identity, or when it uses what is required of making and apprehending works of art to fashion artistic identity through the use, in ways that investigate them, of what is required of such making and apprehending.  See Strayer, Jeffrey, "I$_r$D$_a$E$_d$N$_i$T$_c$I$_a$T$_l$Y," in Douglas, Simone, Geczy, Adam, and Lowry, Sean (eds.), *Where Is Art? Space, Time, and Location in Contemporary Art*, New York: Routledge (2022), pp. 149-165."

4  For Burgin's work see Lippard, Lucy, *Six Years: The Dematerialization of the Art Object*, 2$^{nd}$ ed.  Berkeley: University of California Press (1997) pp. 171-172.

5  If abstract objects can acquire properties, as seems possible, then they are eternal rather than being purely timeless, and their eternality must intersect with the temporality of the existential events in ordinary time on which their acquisition of properties depends.  See Appendix I: Time, Objects, and Properties in Strayer, Jeffrey, *Essentialism and Its Objects: Identity and Abstraction in Language, Thought, and Action* (work in progress).

6  Certain kinds of object can be spaceless, timeless or eternal, and immaterial and yet depend on mind or consciousness.  This is the case in a 'type-dependent' object that depends on some type of conscious event to have its particular identity and yet is abstract in the sense now considered.  See Strayer, Jeffrey, *Subjects and Objects: Art, Essentialism, and Abstraction*, Leiden, The Netherlands: Brill (2007), pp. 217-221.

7  Essentialism can be understood to be a broadening and deepening of Greenbergian Modernism in using necessary conditions of making and apprehending works of art to produce works that reflect conceptually the use of those conditions in their production and apprehension.  See *Subjects and Objects*, pp. 29-32.

8  For a detailed consideration of this history in relation to the images and surfaces of art, and to consciousness, concepts, and language, see Strayer, Jeffrey, "Planarity, Pictorial Space, and Abstraction," in Purgar, Krešimir (ed.) *The Palgrave Handbook of Image Studies*, Cham, Switzerland: Palgrave Macmillan, (2021), pp. 187-202.  See also *Subjects and Objects*, pp. 15-20.

9  Bartók's quote appears in Tamplin, Ronald (ed.) *The Arts: A History of Expression in the 20$^{th}$ Century*, Oxford: Grange Books (1991) p. 52.

10  As Kosuth also produced *Any Five Foot Square Sheet of Glass to Lean Against Any Wall* and *Any Seven Foot Square Sheet of Glass to Lean Against Any Wall* (both in 1965), each of these works is a token of the megatype under which each type named by the title of the work falls.  That megatype could be said to be *any sheet of glass to lean against any wall (as a work of art)*.  Although this amounts to an increase in the complexity of certain relationships, this could be seen to reduce the difference between one of these works and another as tokens of the same megatype, and so to increase their level of abstraction in relation to the higher-level abstraction of the megatype and the minimization of the difference between the works that follows from it.

11  How illustration is related to art and philosophy is complex and interesting.  See Wartenberg, Thomas, *Thoughtful Images: Philosophy Illustrated*, Oxford: Oxford University Press (2023).

12  To understand how it is possible for the same work of art to be identified with nothing or something or everything relative to the same person at different times, or different people at the same or different times, see *Haecceity 1.0.0* in Strayer, Jeffrey, *Haecceities: Essentialism, Identity, and Abstraction*, Leiden: Brill (2017), pp. 340-364.  It is possible to do this by addressing interpretation and understanding through the use of just three words put in the right relation to one another.  See also https://www.jeffreystrayer.com/haecceity-sequence-1/haecceity-1-0-0/

13  For remarks on how this work can be thought to be paradoxical by Margaret Boden and to generate an infinite regress by Diarmuid Costello, see Strayer, Jeffrey, "I$_r$D$_a$E$_d$N$_i$T$_c$I$_a$T$_l$Y," p. 155.  Boden, Margaret A., "Creativity and Conceptual Art," in *Philosophy & Conceptual Art*, Goldie, Peter and Schellekens, Elisabeth (eds.) Oxford: Oxford University Press (2007), p. 230, and Costello, Diarmuid, "Kant After LeWitt: Towards an Aesthetics of Conceptual Art," p. 112 of the same volume.

14  Unless, that is, the language is used to refer to itself or the object that contains it, as with *Nothing, Something, Everything* by On Kawara.

15  See Lippard, Lucy, *Six Years: The Dematerialization of the Art Object*, 2$^{nd}$ ed.  Berkeley: University of California Press (1997) pp. 171-172.

16  I conceive of Essentialism as a complex investigation that includes both art and philosophy as its cultural constituents.

17  The interested reader is referred to Strayer, Jeffrey *Subjects and Objects* and *Haecceities*.

18  For an Abstract work that, paradoxically, can be understood to confirm this in being understood to be an exception to it see *Haecceity 12.0.0* in *Haecceities*, pp. 433–437.  Also, see https://www.jeffreystrayer.com/haecceity-sequence-12/haecceity-12-0-0/.

[19] On how the space of apprehension is designed to solve the problems of number, distribution, figure and ground, and asymmetry that arise with placing language on a two-dimensional surface see *Haecceities*, pp. 63-84.

[20] See Alberro, Alexander, *Abstraction in Reverse: The Reconfigured Spectator in Mid-Twentieth-Century Latin American Art*, Chicago, University of Chicago Press, (2017), p. 2.

[21] This kind of investigation of identity results in different kinds and forms of radical identity, which, in Essentialism, is tied to the creative inquiry into the limits of Abstraction in art. See Strayer, Jeffrey, "I$_r$D$_a$E$_d$N$_i$T I$_c$T$_a$Y$_l$."

[22] On the notion of a medium, and how consciousness and agency, in conjunction with language that is intended to engage them, can be understood to be media, see *Subjects and Objects*, pp. 234-253. To see how they can function as such, see *Haecceities*, and *Essentialism and Its Objects* (work in progress).

[23] Within that *kind* of limit there may be several different *particular* limits, or ways of achieving Abstract Essentialist identity, that can be individually determined by different means that are also of substantial significance and value.

[24] To distinguish it from the philosophical use of haecceity that pertains to the particularity of identity, and to acknowledge its relation to the titles of artworks, I capitalize and italicize the use of *Haecceity* in Essentialist Abstraction.

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Though some have dismissed the imagination as "the junkyard of the mind," just about all artists will vouch for the fact that the imagination is not just essential but also central to the arts. This is true not only of the creation or production of art-works, it is the case also when it comes to the reception or experience of art.

The imagination is a topic in the philosophies of mind and psychology, in addition to other fields. Researchers who work in these areas have spent a lot of time investigating such issues as consciousness and intentionality (very roughly, the object-directedness or aboutness of mental states). But while these two topics are undoubtedly central to their fields, those who work in the philosophies of mind and psychology would do well to broaden their horizons and also explore other topics such as the nature of the imagination. Also relevant here would be empirical data from studies in neuroscience, cognitive science, artificial intelligence, and so on.

Besides many others, here is a brief, non-exhaustive list of broadly at least two sorts of philosophical issues pertaining to art and imagination.

One kind of topics cuts across all the arts. What is the nature of the creative imagination or creativity? Is the imagination involved in our experience of art? If so, how? What about mental imagery? How does the artist's imagination (or *pratibha*, in Indian aesthetics) bear on the evaluation of an artwork? And does it also affect the value of art?

The other set of issues is specific to at least some of the arts. Is the imagination involved in the viewer's experience of pictures, and if so, how? What about the other visual arts such as sculpture, photography, and film? And what are we to say of the role of imagination in the case of fiction when many of us claim to feel empathy or sympathy for or identification with fictional characters we know are not real but only make-believe? Is the imagination involved more generally in experiencing fiction, and if so, how? What about our experience of the other arts such as music, dance, and architecture, for example? For that matter, how about newer art forms such as video games?